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LIFE IN ANCIENT BRITAIN

Engraved bronze mirror-back, Late Keltic.
Found at Desborough, Northants [$\frac{1}{3}$].

LIFE IN ANCIENT BRITAIN

A SURVEY OF THE SOCIAL AND ECONOMIC DEVELOPMENT OF THE PEOPLE OF ENGLAND FROM EARLIEST TIMES TO THE ROMAN CONQUEST

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BY

NORMAN AULT

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WITH ILLUSTRATIONS

LONGMANS, GREEN AND CO.
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INTRODUCTION

THE idea that the everyday life of the people should be the chief concern of the historian has been familiar since the work of J. R. Green. As yet, however, little or no attempt has been made to apply this principle to what are known as "prehistoric" times. But in the development of the institutions, usages and ideas which constitute civilisation, the division between historic and prehistoric does not exist. Many of the social and economic problems of our own day—as, for example, the specialisation of industry, the activities of the middleman, and the functions of money—can best be understood if first studied, not in their present baffling intricacies, but in the simpler yet quite highly developed form which they had already reached in this country long before Caesar's invasion; and by tracing them back to their origins and ultimate causes in the increasing complexity of the earlier social life. Hence of recent years there has been a growing demand that the study of history should begin at the beginning, and should be based on at least a general knowledge of the considerable attainment of this earlier civilisation; for only thus is it possible to realise the history of man as a living, developing, organic whole. Yet the illuminating discoveries of recent archaeological and anthropological

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research remain for the most part in scattered reports and papers or in ponderous volumes accessible only to experts; and there is no single book which presents an up-to-date survey of the whole field of the social and economic life of Ancient Britain.

The present volume is an attempt to supply this lack, and to give a succinct, scientifically reliable and, at the same time, readable account of the origins of our civilisation—an account which, it is hoped, may not only be useful for the upper forms of Schools and, as an introductory study, to Teachers and University Students, but may also interest the general reader. And perhaps some who are tempted to despair of the future of civilisation may find in the spectacle of the sure though slow development of social achievement through the storms and stress of a hundred thousand years, hope renewed, and the promise of the ultimate dawn of an ideal social order.

I cannot leave unacknowledged my great debt to Mr. H. Balfour, Curator of the Pitt Rivers Museum, Oxford; and Mr. R. A. Smith, of the British Museum; for the assistance they have given me from the very outset in the preparation of this book. I must also express my gratitude for many valuable criticisms and suggestions, to Dr. R. R. Marett, Reader in Social Anthropology, Oxford; Prof. A. C. Haddon, Lecturer in Anthropology, Cambridge; Prof. A. Thomson, of the University Museum, Oxford; and Mr. A. Bulleid and Mr. H. St. George Gray, the excavators of Glastonbury Lake-village—all of whom have read in manuscript or proof portions of the book; and also to Mr. E. T. Leeds, of the

Ashmolean Museum, Oxford, who has gone through the whole in proof.

At least twenty of the antiquities which appear in the illustrations to the text have never before been depicted; and for the permission which has enabled me to make these and the other drawings in this book, my thanks are due as follows: to the Director of the British Museum, as regards Figs. 3–5, 6 *c*, 9 *b*, *d*, 10 *a*, *b*, *d*, 11 *a*–*g*, 12 *a*–*c*, *e*, *f*, 16, 17, 20, 21, 22 *e*, *f*, 24 *a*, *b*, 25 *d*, 26, 27 *a*, *c*–*e* 2, *g*, *i*, 28, 29 *a*, *b*, 30 *a*–*g*, *k*, 31–33, 35–40, 48, 49, 50 *a*–*c*, *e*; to Prof. A. Thomson—Figs. 1, 7, 8; to the Curators of the following museums: Pitt Rivers, Oxford —Figs. 2, 6 *a*, *b*, 9 *a*, 10 *c*, *e*, 11 *h*, 22 *d*, 25 *a*–*c*; Ashmolean, Oxford—Figs. 12 *d*, *g*, 41 *a*, 43 *b*; and Northampton—Figs. 41 *b*, *c*, 43 *c*, 45 *a*, *b*, and the Frontispiece; to Prof. W. J. Sollas—Fig. 9 *c*; to Dr. R. Munro—Fig. 14; to Messrs. Bulleid and Gray—Figs. 41 *e*–*g*, 42, 43 *a*, 44, 45 *c*–*h*, 46, 47, 50 *d*; to Sir A. J. Evans—Figs. 27 *h*, 29 *c*; to the Society of Antiquaries of London—Figs. 18, 19, 22 *a*–*c*, 24 *c*–*e*, 27 *b*, *f*, 30 *c*, *h*–*j*, 34, 40 *a*, *d*, *e*, 41 *d*; and to the Royal Archaeological Institute with regard to Fig. 40 *b*, *c*.

N. A.

Oxford, 1920.

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NOTE.—The approximate amount of reduction is indicated below each illustration by a fraction. Thus [½] means that the length and breadth of the illustration are half those of the actual object.

Table of Principal Developments

CIVILISATION	PERIOD OR DATE	DISTINCTIVE FEATURES
EOLITHIC AGE		Flints chipped at edge or corner. Piltdown man. Worked bone club. Heidelberg jaw. Articulate speech.
PALEOLITHIC AGE	STREPYAN	Flint work improves. Stone weapons.
	CHELLEAN	Large well-chipped flint hand-axes. Hunting groups. Sabre-tooth tiger.
	ACHEULEAN i	Finely chipped flint. Fire. Cooking.
	,, ii	Clothes. Cave-life and burial begin.
	MOUSTERIAN	Cave-dwelling. Flakes worked on one face. Funeral feasts. Mammoth. Neanderthal man extinct at close.
	AURIGNACIAN	Cro-Magnon man. Bone and ivory used. Flakes worked on both faces. Art.
	SOLUTREAN	Exquisite flint work. Open stations. Large hunting communities. Huts (?)
	MAGDALENIAN	Cave-dwelling. Best period of art. Flint less used. Horn. Bone. Ivory. Bone needles. Reindeer abundant.
NEOLITHIC AGE	TRANSITION & EARLY PERIOD	Harpoons. Painted pebbles. Pottery. Shell-mounds. Dog domesticated. Modern fauna. Grinding of stone.
	MIDDLE PERIOD	Animals domesticated. Hut-building. Villages. Clans. Ridgeways. Mines. Implements made by various means. Navigation. Agriculture. Weaving.
	LATE PERIOD	Megalithic structures. Sun-worship. Long barrows chambered. Surgery. Round-headed invaders. Cremation. Domestic beakers. Beehive huts.
BRONZE AGE	*c.* 2000 B.C.	Copper, or poor bronze, implements. Round barrows. Sepulchral beakers.
	c. 1800 B.C.	True bronze appears. Food-vessels. Gold, amber, jet, shale. Stonehenge. Flanged celts. Hut-circles. Bronze-foundries. Stone implements fewer.
	c. 1400 B.C.	Cremation spreading. Cinerary urns. Tribes growing larger. Hill-forts. Palstaves. Trade growing. Merchants.
	c. 1000 B.C.	Tin exported. Cremation general. Socketed celts. Looped spear-heads. Cemeteries superseding barrows.
	c. 800–700 B.C.	Goidelic invasion.
	c. 600–400 B.C.	Hallstatt types. Transition begins.
EARLY IRON AGE	*c.* 400 B.C.	Brythonic invasion begins. Iron implements displacing bronze. Currency bars. Vehicles. Roads.
	c. 200 B.C.	Belgic invasion. Gold coinage. Mirrors. Sport. Growth of towns.
	55–54 B.C.	Caesar's invasions. Inscribed coins. Art and commerce. Roman influence. Progress towards national unity.
	A.D. 43	Roman conquest begins.

PART I

CIVILISATION IN THE PALEOLITHIC AGE

LIFE IN ANCIENT BRITAIN

CHAPTER I

Man before the Old Stone Age

THE recent discovery, in 1911, of a skull—or, rather, portions of one—in the gravel of an ancient bed of the Ouse, on Piltdown Common in Sussex, carries back the evidence of the existence of man, as man, on the earth to a point of time far anterior to any hitherto commonly accepted. Some scientists have ascribed it to a date not less than half a million years ago; and though that is still a matter of controversy, the general opinion is that it is the earliest remains of man yet found.

From certain features in the structure and conformation of the skull and the lower jaw—assuming them to have belonged to one another—it is probable that Piltdown man was not capable of articulated speech, though the organ of speech in his brain was already fairly developed; that he walked with a more or less upright carriage; and that he fed himself with his hands. His head and face approximated to those of modern man in form,[1] so that in spite of his receding chin and more prominent mouth, he probably would—other things being equal—pass unnoticed in a crowd of the present day. So much can be told of this man who hundreds of thousands of years ago had developed a brain capacity equal to if not more than

[1] See next page, Fig. 1.

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that of an aboriginal Australian; so much is certain—he was a man, but more as yet is unknown.

Whence Piltdown man had come, and by what devious or progressive steps his forefathers had climbed upwards from the brute, are alike outside the province of this book; suffice it that here and at last a definite stage in the evolution of man has been reached—a stage at which man, as man, existed. Nor is it purposed here to examine every particle of the evidence of man's progress throughout the ensuing ages; but rather to consider the several broadly marked stages of his

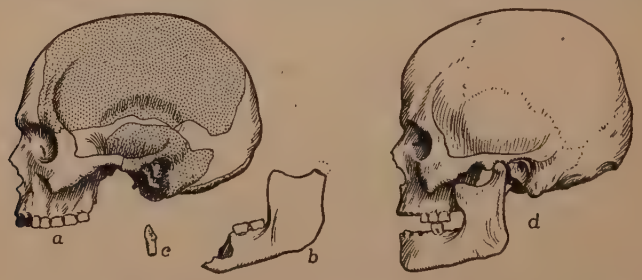

Fig. 1.—The Piltdown skull (*a*) reconstructed by Prof. A. Thomson, showing the existing portions shaded, and compared with a modern European skull (*d*). The fragment of jaw (reversed) and the tooth, (*b*) and (*c*), found in the same gravel.

civilisation, which modern research has shown to have preceded what are called historical times, for what they have to reveal of his social and economic development.

The most primitive civilisation of which indisputable evidences have been found, dates from a time long subsequent to that of Piltdown man, and marks the beginning of a period which, because the use of metal in any form was unknown, is popularly called the Stone Age. But as two definite stages of man's development, each of immense duration, and each easily recognisable by its distinct and peculiar culture, occurred during this period, the words, "Paleolithic," for the older civilisation (*Greek, palaios—old, lithos—stone*), and "Neolithic,"

for the later (*Greek, neos—new*, and *lithos*), are now used to denote more accurately the ages under discussion.

Paleolithic civilisation, then, is the first which will call for detailed examination; and when its earliest evidences, in museums and private collections, are sought out and regarded, the most significant thing about them for the thoughtful observer is the fact that these ancient witnesses of man's activities, these roughly chipped flint implements, are all of them tools and weapons.

Weapons and tools! Thus already has man stepped outside the realm of brute intelligence; already is he become a law unto himself; and, not content with things as they are, already is he using his mental powers to shape them to his will. And then, hard on the heels of these thoughts, another: this cannot be the *beginning* of civilisation—there must have been something before this.

Let us cast our thoughts back even further still, and picture a man scarce more than brute, without weapons of any sort, or, as yet, a conscious need for them. Let us imagine such a man at a moment of peril, hard beset by his enemy—some beast, or but little better—he is cornered by a tree, and, as he makes a last frenzied effort to escape with his life by climbing, a dead branch breaks off in his hand, and still grasping it he falls at the mercy of his pursuer; then in his dire extremity he strikes wildly at his leaping foe heedless of what his hand still clutches, and to his amazement that ravening death itself is smitten dead or wounded at his feet, and *he has not touched it with his hand.* Surely his brain would be quickened then, and to some purpose, for he has gained a long arm which places him at an advantage over others in hunting and in war. The knowledge spreads, quickly or slowly, and a race of club-wielding men walks the earth dealing death at two paces.

How long thereafter would it take man to discover that a heavy stone held in the hand, or bound with thongs of hide on the end of the club, increases the impact of a blow beyond all expectation? How long, to choose, and later on to shape roughly, a pointed or edged stone to enhance still more its deadliness? And when, one day, as he strikes at a foe, the stone or club accidentally slipping from his sweating hand slays his enemy at three paces or four—how soon would man realise that his long arm was now only limited by the jerking power of the mighty muscles of his shoulder girdle? And—for this too had its effect upon his development—how long was it before the lesser animals learnt to keep their distance from this strange biped who walked ringed about by a sacred zone of sixty, or, maybe, eighty paces in diameter, in which, if they entered it, a winged death met them, and none knew how?

Not long, perhaps, as time is counted in those ages, but long enough for these new experiences to be so burnt into the very fibre of man and beast, as to be handed down as instincts to the present day: what boy can see a running rabbit and not look and long for a stone, and what rabbit is there which will not give a boy a wide berth?

So both man and beast assimilated this new knowledge, but with this difference: that whereas the beast has but transmitted its early expedient of avoiding man, man himself by reason of his developing brain had the power to seize on the event and improve upon it; which in fact was precisely the course he had been pursuing in his unceasing struggle for existence through unnumbered generations. But though this potentiality was there already, as has been seen in the case of the Piltdown skull, and though it must always have been there in advance of his experience, it was experience alone that was the spur to the brain urging it ever on

to fresh efforts, until such time, immeasurably later, when, with a mind more highly developed now because of those efforts, man began to reason and deduce facts in advance of his experience.

Hence it is inconceivable that primitive man should, as it were, have sat down one day and, taking thought for the morrow, fashioned for his several sudden needs the quite highly specialised flint weapons and tools of the early Paleolithic age.

That such a train of reasoning can never be substantiated by material evidence is only to be expected: stones lay here and there at hand, then as now; then as now, clubs and staves grew on every side; but for different reasons it is impossible now to identify such as were used. That club which once slew a sabre-toothed tiger has long since mouldered away, it is true; but yonder imperishable stone, not differing apparently from its neighbours, has slain some man's foe hundreds of thousands of years ago, and we know it not.

But it is otherwise when man, responding to those early dim promptings of his mind, began to modify the natural shapes of stones by chipping: at this point it becomes reasonable to expect that such evidence of his handiwork should sooner or later be recognised. But, even so, because the earliest chipping could have been nothing more than a slight emphasising of a natural shape chosen from among others as being the more suitable for a specific purpose, it follows that such handiwork will be the most difficult to distinguish from naturally chipped stones, and therefore the most open to doubt as being of human origin.

Numerous flints which seem to show signs on edge or corner of primitive human chipping have been found in many places in the kingdom, chiefly in those parts contained by a line drawn from Ipswich to Salisbury and thence south to the coast. Such stones

are now called eoliths (*Greek, eos—dawn,* and *lithos*). And, indisputably, they are of an age incredibly remote, reaching back far beyond Paleolithic times which occurred in the latter half of the period called by geologists the Pleistocene epoch—back into that earlier and yet vaster age known as the Pliocene epoch. That is to say, some of them date from a time when the river system of England was different from the present one; when, for instance, the summit of the North Downs was a valley, and the rivers brought and laid down there patches of gravel denuded from higher surrounding land. Eoliths have been found in that gravel and elsewhere, notably on an old land surface now lying beneath the pre-glacial formation known as the Red Crag of Suffolk. But the evidence of human handwork on them, while gaining a wider recognition from year to year, is not yet universally accepted.

The old arguments against the "humanity" of all eoliths maintained that the chipping was due to natural causes, such as the pounding of waves, rolling in rapid rivers, or pressure due to local earth movement. All recent discoveries, however, only tend to establish their "humanity." At least, it is now certain that man existed at the date ascribed to the later eoliths. This is proved both by the Piltdown skull and by the discovery near Heidelberg, in Germany, of a fossilised human jaw embedded in the hitherto undisturbed deposits of an ancient river-bed eighty feet below the present land level. This jaw is universally admitted to be older than Paleolithic times, though probably more recent than the Piltdown remains. And brutal and massive as it is, belonging to a different race of men from that of our own ancestors—to a race, in fact, which eventually became extinct—still the most significant thing about it is that it shows that man was at that time capable of articulated speech. And as a genuine quickening of man's intellect must have both preceded

and followed the use of speech, however rude, it is evident that no argument based on man's mentality can be advanced against the genuineness of eoliths.

An examination of these much-debated implements shows that they fit exactly into the scheme of evolution which governs alike man and his civilisations; and, incidentally, corroborates the general truth of our imaginative picture of early man and his first use of weapons. Most eoliths are small in size, their greatest diameter being generally less than four inches; and, though roughly approximating to several types, of which more later, they are so irregular in shape that their use as weapons is incomprehensible. Any heavy pebble when hafted would make a better bludgeon; any fractured angular piece of rock would be a deadlier axe; and a more serviceable spear-point or dagger could easily be scraped at the end of the first stick that comes to hand; in fact, any conceivable thing, almost, would be a better weapon than an eolith! No, eoliths were *not* weapons, whatever else they may have been. But that is not all: further examination makes it obvious that Eolithic man had not yet attained to that knowledge of flint fracture which even in earliest Paleolithic times enabled his descendants to fashion stone weapons far more lethal than nature can supply. Thus for a long time man's weapons must have been more or less of the "natural" type: for it is beyond question that he had weapons; and, equally so, that if they had been artificially wrought of some enduring material, such as stone, traces of them must have been discovered and identified ere this.

But even through the interminable and apparently stagnant period under discussion, man's mind was developing, surely though slowly, under the continual stimulus of experience. And inevitably it must have followed that he did not always remain satisfied with the purely "natural" weapons of his predecessors.

He must have endeavoured to modify those weapons—or those parts of them, which with his scanty knowledge were modifiable—to meet his growing needs. Hence his wooden clubs and spears, and the hafts of his crazy axes, would be the first to be worked upon—to be shaped for a surer and firmer grip, to be more finely pointed, to be smoothed by scraping away bark and other irregularities. Yet even for such rude work he must have had tools of sorts. Here, too, the law of evolution holds good: the "natural" tool first—an edged fragment of rock used as a scraper or knife, and a pebble as a hammer; and the next step—eoliths.

This argument is supported by other facts connected with the Piltdown discovery: for with the fragments of the skull were found both eoliths and a club made from the thigh bone of a primitive elephant (*Elephas meridionalis*) which had become extinct before the Paleolithic Age; and this bone club had been artificially sharpened to a crude point. While we cannot, of course, be absolutely certain that the skull, eoliths, and club were all of the same date, it is unquestionable that they were brought together and laid down with the gravel by the action of the river at more or less the same time. And this very fact, besides establishing the use of weapons by man very early in his development, proves also that he shaped and modified them by means of tools—by eoliths, or their still undiscovered equivalent.

It is as tools that eoliths must be considered if they are to be considered at all. One of the types frequently found is a flattish flint with one of its sides naturally concave; and almost invariably this hollow-curved side is chipped to some seeming attempt at an edge, while the rest of the implement is left untouched (Fig. 2, *a*); so that it would appear to have been used to scrape the shafts of spears or clubs. Another type chipped to some semblance of a point is regarded as a borer

(Fig. 2, *b*); and yet another as a more or less straight-edged scraper, or perhaps a rude knife. But while possible—even probable—uses are ascribed to many of them; it is admitted that the uses of as many more which are also claimed to be eoliths, are problematical in the extreme: thus providing the sceptical in this matter with another argument against their "humanity."

Those, however, who have most closely studied the

Fig. 2.—Eoliths from the Kent plateau [⅔].

chipping of eoliths claim that the later work, which is of early Pleistocene date, shows a marked improvement on what had been done before; and that the last and best phase was superseded gradually by the still better forms of the earliest Paleolithic culture which first appeared about the middle of the Pleistocene epoch. It is probable that future discoveries will justify this claim, and prove beyond shadow of doubt that Eolithic culture had its place in the development of mankind, and was in very truth the "dawn" heralding the glories of the Paleolithic Age.

CHAPTER II

The Ancient Hunters

As the first faint glimmer of dawn never blazes into sudden meridian light, but by imperceptible degrees grows into the perfect day, so it ever is with man and his works. The earliest paleoliths were better certainly, but not so much better than the latest eoliths which they superseded; and it is a far cry in time, as in civilisation, from the first clumsily pointed flint daggers but little removed from the "dawn," to the beautiful leaf-shaped flint spear-heads wrought at the zenith of Paleolithic flint culture—a far cry indeed, being probably not less than a hundred thousand years.

So long, or longer, was Paleolithic civilisation developing. And many things of much moment happened during that time. There was, for instance, a recurrence of the process of glaciation, popularly called the Ice Age, which twice or thrice previously in the early Pleistocene epoch had laid its frozen grip on all northern Europe, and had covered the northern parts of Great Britain with an ice-sheet of prodigious thickness—as much as three thousand feet deep in Scotland, and gradually thinning thence southwards towards the Thames. And if one should say that man gave up his ancient dwelling-places, and retreated before its inexorable approach, that literal truth would convey a false impression, for the fact is, the advance of the ice-sheet—as also its retreat—was so slow as to be undiscernible, even during two or three generations.

And not once only, but most probably twice, this stupendous phenomenon of glaciation was repeated, after a long intervening period of dry, cold climate. Further, mighty rivers scoured out wide valleys, in the case of the Thames to a depth of over one hundred feet, valleys which, later on during periods of land subsidence, were slowly silted up once more; only to be re-excavated during upheaval, time and time again. And rightly to appreciate what this means, it must be remembered that neither the process of silting, nor the far more rapid one of erosion, was perceptible to the man living on the river-bank. Moreover, a race of men (*Homo neanderthalensis*) distinct from our progenitors, though derived from the same original stock, flourished alongside them and shared their civilisation until—one might almost say, suddenly—it disappeared from the face of the earth, towards the close of this period. Hordes of strange animals, too, most of them long since extinct, succeeded one another in migratory waves, and roamed in English forests and plains and rivers for thousands of years, and then disappeared, giving place to others as strange: for England was not as yet separated from the mainland by sea. Only a few of these animals need be mentioned here: the straight-tusked elephant, the leptorhine rhinoceros, the large hippopotamus, the sabre-toothed tiger, and the striped hyæna; these were followed by the mammoth, the woolly rhinoceros, the cave-bear and cave-lion, and the cave-hyæna; and these, in turn, by the reindeer, the ibex, the musk-sheep, and the arctic hare and fox.

Such, then, was the unimaginable duration of Paleolithic time; such was the changing environment of man's ceaseless struggle for existence; and it is against such a gloomy background of incalculable physical force that we must watch the growth of this new element in the scheme of nature, the spirit of man, as it were a spark of fire exposed to all the winds of

heaven, and they blow upon it and it is not quenched; nay, more, it is fanned into lambent flame by those very powers which threaten to extinguish it.

But before we begin our examination of man's activities during this period, it should be understood that as political divisions of land as we now know them did not exist, all north-west Europe was simply one country with one civilisation, as in Eolithic times; and that Britain, not yet an island, was part and parcel of it. Hence it is unnecessary for our purposes always to discriminate between the separate evidences contributed by what are now known as the British Isles, France, Belgium, and Germany; especially as one country supplements or corroborates the witness of another, and in such a manner that it is only by regarding the sum total of the discoveries that a picture, trustworthy in the main, however imperfect in detail, can be obtained.

The development of Paleolithic civilisation can be likened to a flight of steps; the first two or three steps are missing, it is true, but beyond is a regular unbroken ascent in definite stages. It has been shown that Eolithic culture in all probability supplies what is missing at the foot; and as for what lies beyond the top—that is always out of sight until we get there! Seven[1] definite stages of progress are now known to have occurred, each named after the site where the evidences of its particular culture were first discovered or identified, or were best represented.

In the earliest forms of Paleolithic flint culture, the Strepyan (Strépy, Belgium), a transitional stage between Eolithic and Paleolithic workmanship can be clearly perceived. The typical eolith, as we have seen, was only slightly chipped to enhance some natural feature of the stone, the greater portion of the crust being left untouched; but while such partial chipping is still a

[1] The periods Acheul I. and II. being taken as one.

characteristic of Strepyan flints, a bolder modification of their natural forms shows that man was now gaining some knowledge of flint fracture. Probably the first artificially made stone weapons appear: such as the roughly cylindrical nodule, or natural lump, of flint which retains its original surface untouched except at one end where by bold chipping it has been sharpened to a point. About five inches long, it is thought to have been a dagger (Fig. 3, *a*). But most of the implements of this period are unquestionably tools for cutting and scraping (Fig. 3, *b*), and for boring, that is, tools for working in wood; and one and all show a great improvement on the hesitating and tentative chipping of the eoliths.

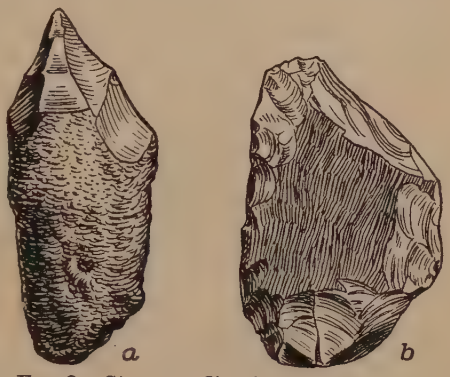

FIG. 3.—Strepyan flint implements, from Belgium [$\frac{3}{8}$].

Definitely now, the dark immeasurable ages of the "dawn" are over; and abroad throughout the land man's mind is stirring and quickening with a new life. The growing use of articulated speech, however rude and primitive, is undoubtedly the chief factor in his development. Cries of alarm and calls of warning, growls of anger and grunts of satisfaction are no longer adequate to express the extending gamut of his thoughts and feelings; and gestures and vocal mimicry, from being his other sole means of communication, would now only be used for emphasis.

The increasing confidence of the craftsman, which is always born of a better knowledge of his material,

becomes very apparent in the flint implements of the period next to be considered—the Chellean (Chelles, France). These are especially noteworthy for their large size, and the spirited, if crude, chipping by which the original shapes of the stones are radically changed into preconceived forms. Rarely is any portion of the natural crust now retained, except in such places where, if anything, it adds to the efficiency of the tool. And the fact that most of these implements have been chipped into one of three or four definite shapes, suggests that man's other implements of perishable wood, both previous and contemporary, were likewise fashioned after several patterns for several distinct ends. In other words, man was becoming more and more self-conscious, recognising his needs and setting himself deliberately to supply them. Only those who, with a flint in each hand, have tried to chip one by repeated blows of the other into a definite preconceived shape symmetrical from three points of view, can realise with what deliberation, with what steady patient application, Chellean man must have worked; and how dire the need which so early in man's development schooled him in such self-discipline —wanting which, civilisation would never have been.

We need here only note the two most important types. One is a flattish pear-shaped implement, tapered, edged and pointed by chipping, but at its heavy rounded end generally retaining the natural crust of the stone. And because the butt fits the palm of the hand, and it is not very apparent how they could have been hafted, they are called hand-axes (Fig. 4, *a*). The other is a long-oval, flat implement chipped to an edge all round, and worked all over until both faces are slightly convex (Fig. 4, *b*). As such a weapon would have wounded the hand grasping it as much as the object struck by it, this type must have been hafted as a round-edged axe, either by means of a loop of pliable green wood firmly

bound with sinews or strips of hide, or wedged into a slot cut in a stout wooden handle. The latter method is still used by the natives of New Guinea, and the former was used within living memory, by the natives of Australia, to haft similar stone weapons.

Following a long but indeterminate phase of transition, the implements now recognised as Acheulean (St. Acheul, France) mark the next stage of man's progress; and though these were unquestionably evolved from Chellean forms, in beauty of workmanship and

Fig. 4.—Chellean flint implements: (*a*) Gray's Inn Lane, London; (*b*) Thetford, Norfolk [$\frac{1}{4}$].

symmetry of form, they are a thing apart; and now at last they appear to one as having been entirely adequate for the ends for which they were made. And if the uses of certain paleoliths of all periods are problematical, their conformity to type and the painstaking care shown in their manufacture prove that they cannot have been made without intention, to be used in some eventual and unforeseen capacity. But, even so, that is not to affirm that these early implements had only one function: that a pick which once had cracked a cave-bear's skull was not afterwards used to dig up edible roots, or to wrench a likely flint from its native chalk. The earlier types are few,

the later, many; and the specialisation of tools and weapons necessarily partook of the same slow development as man himself.

Among Acheulean implements, hand-axes and their more attenuated forms called picks, and the flat, oval shapes (Fig. 5, *b*) still persist, though now so finely wrought, that their edges, viewed edgewise, are quite straight—a great improvement on their prototype's wavy, irregular edges. But the most remarkable perhaps are two allied types which have been found in great numbers. These, too, are derived from Chellean forms, and are flattish implements, round-oval or circular in plan, convex on both faces, and chipped to an edge all round — such a shape as would be made by two shallow saucers held rim to rim (Fig. 5, *a*). Their all-round cutting edge makes use in hand—as their disc-like shape, in haft—improbable; and they seem to have been meant to be effective whichever part of the edge chanced to come in contact with the object. Now, in an examination of a skeleton found at Galley Hill, in Kent, a few years ago, and, by some, thought to be that of a Chellean man, amongst other peculiar anatomical features it was remarked as being noteworthy that his pectoral muscle had been particularly well developed. This is the muscle which swings the shoulder and arm forward,

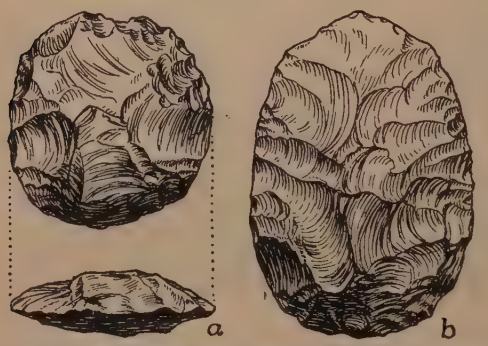

Fig. 5.—Acheulean flint implements: (*a*) Stanton Downham, Suffolk; (*b*) Swanscombe, Kent [⅓].

and in consequence is the one chiefly concerned in such an action as throwing. At this time man, of course, was primarily a hunter, as he always had been. We have seen how perhaps he first evolved the use of missiles; and as he developed his other weapons and tools it is but reasonable to suppose that his missiles likewise underwent modification: the fortuitous "natural" pebble at first; then chosen ones which were modified more and more radically until in Chellean times they clearly foreshadow the implements under discussion. By such a course these have now arrived at the ideal shape for throwing. Hence it would seem practically certain that the all-round-edged implements which approach a discoidal form were throwing stones. Among other typical implements of this period are recognisable spear-heads; and towards the end, numerous small scrapers, and chopping and cutting tools.

Such, then, was the progress of flint culture during the first three divisions of the Paleolithic Age. But again and again it must be emphasised that countless generations of men lived and died during each successive period and each transitional phase, and for those men *the world was as it always had been.* Hence it should be remembered that when one glibly says that a fine type of implement was evolved from one less fine, thousands of years of patient human endeavour are obliterated at a breath.

Man at this time has been described as a "care-free hunter" wandering where he chose. A wandering hunter he certainly was, like his fathers before him, though better equipped and more resourceful than they. But "care-free?"—he was a hunter not from choice but from necessity: the eternal problem of food was as insistent in those days as in these; and most assuredly it was that daily struggle to provide for himself and those dependent on him which sharpened

his wits and, incidentally, his weapons. That, and the need to be constantly alert against possible attacks by his enemies, beast or fellow-human. Thus, as far as we have reached, and a little further, too, the only evidences of his activities yet discovered, are solely and wholly ascribable to his struggle for existence.

The climate of the Chellean period had been definitely warm, and man's own hairy skin still afforded him enough protection against seasonal change; but with early Acheulean times the temperature began to fall steadily, heralding one of the recurrent periods of glaciation. And though it is at this stage that the first evidence of man's use of fire is found, it is not a coincidence but a consequence: for the growing cold must have acted like an urgent spur to his intelligence, and there and then man faced and found the solution of another problem. Doubtless the first discovery of fire was accidental, but its perpetuation was not. Often before this a chance flash of lightning must have set a tree on fire; and, with curiosity overcoming terror, men must often have crept warily near to it and felt on their bare bodies a pleasing unexpected warmth which somehow strangely vanished as the conflagration died down. Now, however, man has at last learnt—by what stages, and at what cost of burnt fingers, we can only guess—that fire can be kept alight by feeding it with fuel, and can be limited in area by leaving a bare space of earth or stones around it. But for a long time, probably many centuries, the sacred flame had to be guarded and cherished perpetually, before any artificial method of producing it could have been invented. In this connection, it is interesting to note that the Andaman Islanders when first discovered were actually living at this stage of development—using fire without being able to produce it. The cooking of food, at first, as may be surmised, accidental, inevitably followed on the

habitual use of fire; and burnt bones occur very early among the remains of these ancient hearths.

In late Acheulean times the increasing severity of the climate appears to have made life in the open, even with fires, an impossible condition of existence; and man, again using his wits, sought out and fought the cave-bears, cave-lions and cave-hyænas for their sheltered lairs. But of the fearful encounters which ensued in the darkness of the caves between naked men armed only with the crude weapons described above, and the cornered and infuriated beasts with their terrible claws and gleaming teeth and almost impenetrable fur, imagination alone can tell, for the discoveries are silent of all except the result. Excavations show that man now began to inhabit caves and rock-shelters which, until his coming, had been the dens of these animals for thousands of years.[1] So brain somehow won, as it always will in the end, when pitted against mere brute force.

About this time, too, man began to wrap about his body the furry skins of animals slain for food. And although, as some aver, clothing may have originated in the custom of wearing various objects attached to the person as ornaments; it is beyond question that the definite appearance of clothes at this time is not unconnected with the changing climatic conditions which caused man to make use of fire and to inhabit caves. In such confined places fires continually burning must have resulted in a temperature considerably above the normal; and this artificial warmth to which man became habituated must sooner or later have lowered his physical reaction to cold, and thus have made necessary some sort of covering for his body when exposed to the open air. And it is this

[1] Kent's Cavern, near Torquay; the Cresswell Caves in Derbyshire; and the rock-shelter at Oldbury Camp, near Ightham, Kent, being the most famous examples in Britain.

usage which accounts in part for the numerous small scrapers, previously mentioned, of the late Acheulean flint culture—for they seem to have been used in the preparation of skins for clothing.

Thus, we see, before the end of this period, man communicating with his fellows by means of articulated speech, making and using tools with admirable craftsmanship, cooking his food and warming himself by the side of the fire, and wearing clothes and taking shelter from the growing inclemency of the climate. And if in these developments we can see how far at this time man had travelled since early Paleolithic days, we can also recognise in them unmistakable proofs of our common humanity. But there was another development which touches us yet more nearly—one which has for the thoughtful mind an emotional quality hitherto absent from the evidences of human progress. Man began to bury his dead with simple ceremonies which, even at this remote time, show that he was no longer concerned only with the problems of life but also with the problem of death—revealing as they do some sort of faith in a future existence. One discovery at least, unquestionably dating from the close of this period, shows that the body was buried lying on its side with its head supported by a pillow of flints, while an Acheulean hand-axe was placed in its hand, and within reach other implements of flint for use in the life beyond.

CHAPTER III

The Cave Dwellers

From the close of the Acheulean period onwards to the end of the Paleolithic Age man is usually described as a cave-dweller. But while accepting that general description, a word of warning must first be uttered. Although it is in caves and rock-shelters that the most abundant and remarkable evidences of his existence have been discovered, still his stone implements and the sites of their manufacture have been found in the open country with such frequency as to prove that the caves, if the most characteristic, were not his only dwelling-places.

Broadly speaking, however, the picture of Paleolithic life was radically changed during a transitional period of uncertain duration, which followed in the train of this and other innovations of late Acheulean times. So that when we come to consider the next broad stage of civilisation, the Mousterian (Le Moustier, France), we find that all the tendencies noted in the preceding chapter have in the meanwhile become transformed into general habit. Man, though still perforce a hunter, is no longer a homeless wanderer on the earth, for the evidence from now onwards shows that he inhabits the same place for long periods together. Now, about the mouth of the cave the whole life of the family revolves, by day. The children run in and out, and play on the bank of the stream beyond; the women tend the fire there, and there prepare and

cook the food, or dress the skins for clothing; the men make or mend their weapons there, and thence they set out to hunt and thither return again with their kill; and old and young sitting round the fire there eat their meals together. And at night, sheltered from wind and weather, and doubly guarded from the prowling beasts by the walls of the cave and the fire at, or just within, the entrance, the little community sleeps in a safety never known before to mankind. In other words, man, even at these remote times, was beginning to make for himself some faint semblance of home-life, and to live under those artificial conditions which have made possible all subsequent developments of civilisation. Among the numerous caves in Britain which have yielded evidences of continuous or occasional habitation from this period to the close of the Paleolithic Age, may be mentioned Kent's Cavern and Brixham Cave in Devon; the Hyæna Den at Wookey Hole in Somersetshire; Paviland Cave, Long Hole Cave, and others in Glamorganshire; the Cresswell Caves in Derbyshire, and the Victoria Cave at Settle in Yorkshire.

With man's first inhabitation of caves and rock-shelters his flint culture begins to take on a wholly different character from the earlier Paleolithic technique. It has been shown that up to this time the implements had each been made from a whole flint stone; and that though its crust had been chipped off here, or there, or all over, the "core" of the stone was always retained—it being, of course, the implement; while the chips or flakes struck off in the process of its manufacture were mostly so much waste material. Now, however, with a better knowledge of flint fracture, the reverse method obtains; and the "core" implements are gradually superseded by implements made from flakes struck off a core. And in the early definite use of flakes, that is, from late Acheulean to the end of

Mousterian times, the flake itself is worked into its preconceived shape by chipping on one surface only, the other still retaining untouched the smoothness of the original fracture.

It is from flint flakes, then, that Mousterian man fashioned his implements, the far greater number of which are obviously tools—scrapers (Fig. 6, *b*, *c*), planes, and pointed borers of every conceivable shape; while among the weapons are numerous beautifully pointed objects varying from something under two inches to nearly five inches in length, and supposed to be the heads of spears or javelins (Fig. 6, *a*). The edged dis-

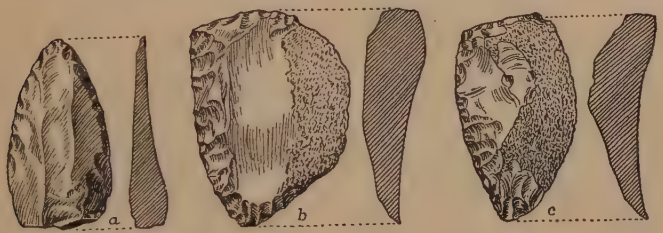

Fig. 6.—Mousterian flint implements, with sections: (*a*) and (*b*) Le Moustier, France [$\frac{1}{3}$]. (*c*) Mildenhall, Suffolk [$\frac{1}{4}$].

coidal throwing-stones disappear towards the end of this period, probably being superseded by arrows and darts which better performed their office; but spherical forms begin to be found instead. These are thought to have been used in pairs attached together by a thong, and thrown whirling round each other to entangle the limbs of the hunted animals; after the manner of the bolas of the South American natives. At this time, too, there is some evidence that implements were beginning to be made from bone, the use of which in the following period became extensive.

With the close of the Mousterian period the primitive race of man (*Homo neanderthalensis*), which has been mentioned above, disappears entirely;

but as yet nothing is known of the cause of its extinction. It seems that these men shared in the civilisation of our own race (*Homo sapiens*), and also that they buried their dead with some ceremonial, and possibly even originated that custom; but for some unascertainable reason they were not equal to the struggle for existence, and so vanished, and were no more seen.

If hitherto, in our survey of Paleolithic man's activities, the development of his flint implements has seemed perhaps to have been unduly stressed, it is because they are the only records of his life which have withstood "the envious tooth of time." But that

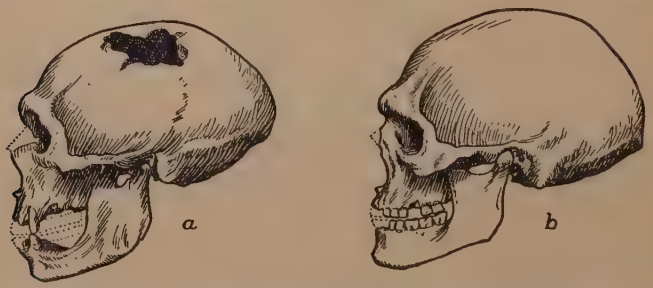

FIG. 7.—A Neanderthal skull (*a*) from La Chapelle-aux-Saints, France, compared with an aboriginal Australian skull (*b*).

is not so in the subsequent and culminating stages of his civilisation, owing in part to the fortunate fact of his inhabitation of caves and rock-shelters, and in part to his growing use of other, more or less imperishable, materials to supply his growing needs.

And if at this point, his use of articulate speech, of tools and weapons, and of fire and clothes, shows something of the enormous gap now dividing man and brute, it is just as evident that all these developments are purely material and utilitarian in origin and habit. And, viewed superficially, they would seem during Mousterian times to have ministered only to his

physical well-being. But man—even primitive man—is compounded of more than flesh and blood. And, as will be seen again and again in the course of this work, it is only by an improvement of the conditions of his existence that any real and general progress of the human mind is made possible. It is as if one should take a starved and over-shadowed sapling and set it in a sunny place and water it; and when root and branch and leaf have thriven responsive for a season, it puts forth sudden unexpected flowers, beautiful and strange.

So it would seem with Paleolithic man: for the next period to be considered, the Aurignacian (Aurignac,

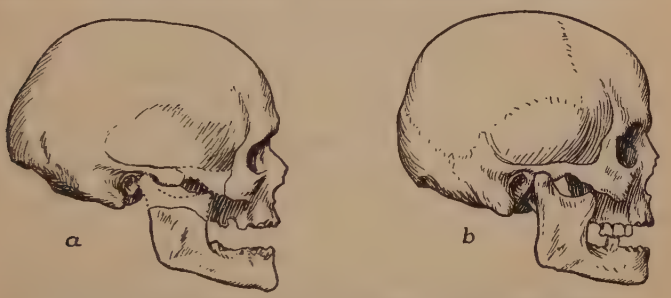

Fig. 8.—A skull of the Aurignacian period (*a*) from Cro-Magnon, France, compared with a modern European skull (*b*).

France), while noteworthy for many developments, is chiefly remarkable for one which dominates and dwarfs them all—its marvellous artistic attainment.

But there is at present a certain amount of doubt as to the origin of this art. Some authorities think that the men of the Aurignacian period migrated into north-west Europe from the south or east, towards the end of Mousterian times, bringing their art, or the capacity for it, with them; and that the extinction of Neanderthal man was due wholly or in part to his contact with this superior race. Others think that the continuity of occupation was unbroken; that "Homo

sapiens" lived contemporaneously with the more primitive race until in course of time it died out; and, hence, that art was an indigenous product. It is at least significant that an examination of Aurignacian antiquities does not show any break in the regular evolution of flint culture; while the growing use of bone implements, now becoming apparent, was, as we have seen, foreshadowed in the Mousterian period.

More light will doubtless follow future discoveries. But in the meantime it should be remarked that the æsthetic impulse, although so startlingly manifested at this time, was no new development of the spirit of man. Earlier, immeasurably earlier, we can trace in his sole existing handiwork—the flint implements—a growing appreciation of form and an unceasing pursuit of symmetry. To these, in Acheulean times, must be added a new-born care for surface and finish,[1] to achieve which he was impelled to an expenditure of labour oftentimes in considerable excess of what was necessary for the mere efficiency of the implement. Such desires, such "useless" work, having strictly no survival value for the race, can only have been due to the development of that æsthetic sense in man which perhaps more than anything else has helped to lift him above the brute. Thus it becomes apparent that the art of the late Paleolithic Age was not after all a blossom without root or growth, but that it sprang from man's age-old craving for something more than material good—from his inherited and increasing love of beauty. Further, there is every reason to suppose that this love of beauty, to which man gradually awoke, remained ever after constant with him; so that when the conditions under which he lived permitted of any surplus energy over and above the struggle for sheer existence, we never fail to find him expressing himself æsthetically; although, as we shall see, the characteristic expression

[1] See, for example, p. 18, Fig. 5 (*b*).

of different periods may and does vary according to his daily activities and his outlook on life.

The chief sites of the discoveries of late Paleolithic art are caves in the valleys of the Dordogne and the Garonne in France, and the north coast of Spain neighbouring the Pyrenees; though an isolated example or two have also come to light in England. But wherever this art has been found, no matter either the degree of excellence to which it attained, or the medium in which it was expressed, whether sculpture in the round, carving in low relief, engraving, drawing, or painting, it was for the most part realistic in aim, and was called into being by the same needs and desires of man's heart.

It is generally thought that sculpture was the earliest means by which man sought to represent the life around him; and this because, on the one hand, it is the least conventionalised form of art; and, on the other, the untutored eye can more readily perceive a likeness in the solid than in an outline drawing. The origin of sculpture can most probably be traced to chance finds of natural objects of wood or stone, which in shape suggested some familiar animal or human resemblance—a resemblance which man first sought to improve by slight modifications or additions of distinctive details, such as scratched lines to show eyes or mouth. This is a practice found to-day among backward races, and not unknown to youth in general. Success in such tentative modifications would encourage further and more radical alterations, until the day came at last when some man essayed the carving of some likeness on his own initiative.

The sculpture of this period shows a general use of engraved lines to indicate hair and other details which could not be easily represented by form alone. And many authorities think it was from these supplementary lines and scratches that the idea of drawing

in outline on the flat was next evolved. It is evident that the more extensively such a means of expressing form and detail was used and understood, the less necessity there would be to carry to completion the more laborious work of sculpture. Hence, with the dawn of this perception, it is likely that the first attempts at a purely graphic art were made. Certain it is that drawing very early became disassociated from the plastic art of sculpture; and that, developing its own characteristic conventions and limitations, and concerning itself with only one aspect of nature at a time, it became both less imitative of nature and a swifter method of portraying it. And not only are the later developments of all pictorial art implicit in these ancient drawings; but the drawings themselves almost certainly led to picture-writing within the Paleolithic Age; and from picture-writing, through hieroglyphics, can be traced the use of modern alphabetic symbols.

Curiously enough, carving in low relief was in all probability derived from drawing on the flat, and not, as is often supposed, from sculpture in the round. The drawings of the Aurignacian period, to judge from those which have survived, were most frequently made by means of scratched or engraved lines on stone or bone—with the idea, it would seem, of giving them a certain degree of permanence which would not have been possible with the use of such a medium as charcoal or chalk, both familiar to man at that time. Thus by consecutive stages—by gradually deepening the incised outlines, and, subsequently, rubbing down or cutting away the ground till the figure stood raised above it; and then by rounding the edges of the figure, and lastly, by carving its surface—the Aurignacian artist at length arrived at a true bas-relief. And, in passing, it is not without interest to note that these evolutionary stages are themselves practically repeated

to this day during the production of low-relief carving in wood and stone.

But while these different forms of art are thought to have appeared in the foregoing order by many students—among whom are artists who have brought an intimate knowledge of the various technical processes to the study of man's early practice of art—opinion is not yet unanimous on that point. And it should be remarked that sculpture in low relief is supposed by some to have been the forerunner of engraving and drawing; although such a theory leaves unexplained how the figure to be carved in relief was first traced or projected on the piece of ivory or what not, if the graphic art had not previously been developed.

However that may be, it is certain that sculpture in the round not only preceded the other arts, but also attained to a higher standard of excellence in Aurignacian times than either of them. And towards the close of this period, the numerous little statues of the human figure, carved in ivory and soapstone, show in their modelling a real appreciation of form, marvellous at such an early stage in man's development.[1]

Yet, with the exception of these small statues, and of one or two other rock sculptures of the human figure in low relief, all man's artistic endeavour seems to have been concentrated on the representation of animals. On fragments of ivory, horn, bone and stone, as well as on the walls of his caves, he depicted the animal life around him. And though his early attempts are crude and child-like drawings in profile, showing only the two legs of a quadruped seen from one side, still they are a beginning; and from them his artistic development can be traced to the end of this period, when better draughtsmanship enables him with but a few lines to

[1] The head of a girl, carved in ivory, shown on p. 39, Fig. 12 (*d*), is probably Aurignacian also.

produce a realistic effect, and—more wonderful still—the illusion of movement.

In addition to these forms of artistic expression, the walls of his caves show that man was also experimenting with various pigments, with the result that, besides painting in outline, he began to colour his engravings and sculptures; and a palette of schist has been found in one of the caves which still bears the red and ochre colouring-matter used for that purpose in late Aurignacian times.

Decorative design, too, makes its first appearance during this period, when man begins to carve geometric patterns on his bone and ivory implements. And although such decoration is no more than an arrangement of zigzag or parallel lines and circles, it likewise reveals his increasing love of beauty and a desire to bring it into his workaday life. This desire is also shown in the numerous articles of personal adornment which have been found—ivory bangles and pendants, and necklaces of carved ivory and reindeer-horn beads, of sea-shells and the teeth of animals, both likewise perforated.

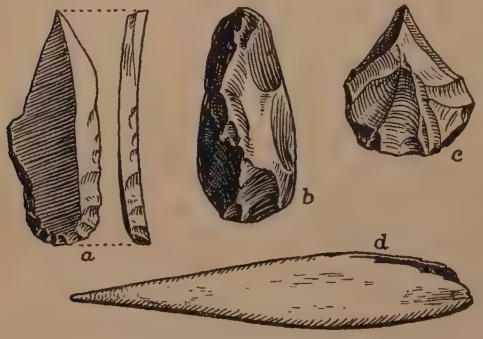

FIG. 9.—Aurignacian implements of flint and bone: (*a*, *b*, *d*) France; (*c*) Paviland Cave, Glamorganshire. *a–c* [$\frac{1}{4}$]; *d* [$\frac{2}{5}$].

As might be expected, such a considerable artistic activity has left unmistakable traces on the forms of the flint implements of this time. So much so indeed that we now find numerous graving-tools of all

descriptions, many of which having a scraper at the opposite end to the burin (Fig. 9, *a*, *c*), may perhaps be likened to those modern contrivances—pencil at one end and rubber eraser at the other. There are also planes (Fig. 9, *b*), scrapers and cutting tools for working in bone, wood and stone. The typical weapons are long bone spear-heads with the base split to receive the shaft (Fig. 9, *d*); but tanged lance-heads, or dart-heads, of flint flakes chipped now on both faces, begin to be found. And the first use of flint and bone points for arrows, which previously had only been sharpened and then hardened by charring in a fire, is also ascribed to this time.

The climate had been wet and cold subsequent to the period of glaciation which, in early Mousterian times, caused man to take to the caves. But throughout the Aurignacian period, while still cold, it was becoming increasingly dry, and man here and there began to make his camps in the open country again, but probably only during the milder summer seasons. This practice became more general in the next period to be considered, the Solutrean (Solutré, France), during which the climate remained cold and dry until towards its close; but, even so, cave-dwelling was never entirely discontinued.

With his return to an open-air life man's activities necessarily underwent a change. His æsthetic impulses grew less urgent for the time being, or, rather, seem for the most part to have taken a different direction. For while comparatively few remains of either realistic or decorative art have been found, the discoveries of enormous numbers of flint implements, and the remarkable perfection of technique displayed in them, together show that during this period man's productive energy was almost wholly absorbed in his flint culture. And this is now brought to a beauty of form and finish never before seen, and only to be equalled long subsequently by the best implements of Neolithic times.

The most typical examples of this Solutrean work are long, thin blades of flint shaped like a laurel leaf, and thought to be spear-heads. Although varying from nine to nearly fourteen inches in length, and less than half an inch thick, these marvels of craftsmanship are, in fact, "core" implements; and have each been reduced from an amorphous mass of flint weighing many pounds, to their present leaf-like tenuity of form by the most delicate flaking and edge-chipping (Fig. 10, *d*, *e*). Another type, seen now for the first time, is a slender arrow-head or dart-head having a barb on one side only, sometimes called a shouldered-point (Fig. 10, *c*); and these have been found in great numbers, over five thousand of them being collected in one cave. Scrapers and planes (Fig. 10, *a*, *b*) abound too; and though they are not a peculiar feature of this period, the excellence of its technique is perceptible in them also.

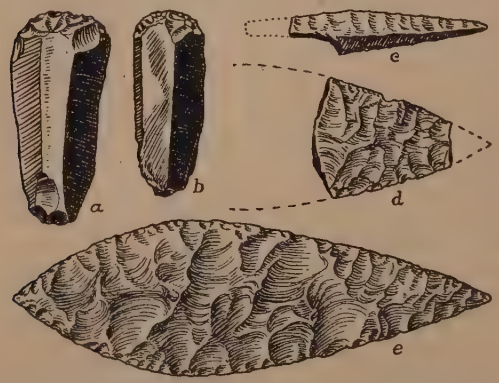

FIG. 10.—Solutrean flint implements: (*b*, *d*) Cresswell Caves, Derbyshire; (*a*, *c*, *e*) France. *a*–*d* [½]; *e* [¼].

With the close of Solutrean times the last phase of climatic severity set in. This is thought by some to have been the final recurrence of glaciation. But however that may be, it is certain that during the following period, the Magdalenian (La Madeleine, France), the cold was more intense than ever before throughout all north-west Europe. Man took to his caves again, and

resumed the life which for a time had almost ceased to be. And had we not already seen that the tendency of such an artificial existence is to foster and encourage man's higher mental activities, the fact that Paleolithic civilisation reached its highest and best under climatic conditions of unprecedented severity, would seem almost incredible.

All the many and diverse evidences which have been discovered of Magdalenian culture tend to prove that the cave, from having been at first used by man solely as a shelter against inclement weather, had now taken on some real semblance and significance of a home.

A home! The word is used thoughtfully and deliberately, with full cognisance that if we could take a step back in time, keeping the while a memory of all that the word "home" means for us—if we could, and did, enter a Magdalenian cave-dwelling, its unloveliness, its intolerable discomfort, and its lack of anything we could recognise as home-like—except perhaps the ruddy glow of the fire—would drive us out into the night with a craving for air, and space, and cleanliness—the last perhaps most of all.

But disappointed feelings and outraged senses would have blinded us to its real value and significance. There is another aspect of it, and we failed to see it.

Let us look at this Magdalenian home from the other side, and with other eyes than ours. Let us suppose that a man of the first great period of Paleolithic civilisation—a Chellean man—could have stepped forward in time to its last great period; and also that he was standing before the mouth of the cave at the very moment when we rushed out of it in disgust.

The gleam of firelight which streams out into the night when we thrust aside the sewn reindeer-skin curtain hanging just within the cave mouth, stops him with a shock on the threshold. But the curtain falls

back across the entrance, and all is dark again. Presently, with a stealthy cat-like tread he creeps up to the curtain and touches it curiously. Instantly his hunter-sense tells him it is some unknown animal, and instantly he strikes at it with his trusty hand-axe. The curtain is dashed to the ground and he stumbles into the light of the fire dazzled and blinded by its glare, to stand transfixed by all the wonder and terror of the leaping flames.

Let us suppose, even after so rude an entrance, that Magdalenians welcome Chellean to their dwelling. A place beside the fire is offered to him. He dares not approach so near to it, but squats on the floor afar off, his toes twitching among the charred and broken bones which, with other litter, cover the whole floor of the cave inches deep. Squatting there he is conscious of a sun-like warmth on his naked body, and is mystified because there is no sun to be seen. Beneath his heavy and bushy brows his eyes glance furtively and mistrustfully about him. The bodies of these strange people, he thinks, are even more hairy than his, but their arms and legs seem to have been worn bare to the skin; and as he dully wonders why, one of the men near the fire, growing uncomfortably hot, slips his fur-skin clothing from his shoulders and chest; and the Chellean marvels that a man should skin himself thus—and live! Wonder follows wonder: a woman rises, and, taking in her hand a tool he has never seen, goes bravely near the fire, and cuts off a portion of something hanging above it. Coming up to him she speaks and offers what is in her hand; but her rapid speech is as the sound of a babbling brook, and full of strange noises. One sound, however, he recognises—it is like his word for meat. He replies with a few slow words and a grunt of satisfaction, and takes the proffered food. Instantly he drops it and leaps to his feet with a cry of mingled alarm and anger. The meat is *hot!*—the smell of it,

strange!—it is not food at all! He had previously seen the rest of the reindeer's carcase stowed away in a niche of the cave-wall, and now, striding thither with his silent cat-like movement, he hacks off it a gobbet of raw flesh and bone with his hand-axe, and begins to devour it with relish; much to the disgust of the Magdalenians who mutter to each other that this strange naked man is but little better than an animal.

His weapon attracts their attention, and while he is eating they gather round and examine it carefully.[1] Their expressive faces show their verdict: so clumsy—so

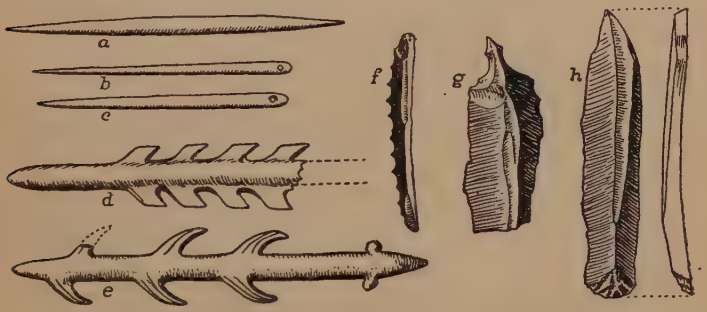

Fig. 11.—Magdalenean implements: (*a*) bone pricker, (*f*) flint saw, (*g*) flint borer. (*c*, *g*) Cresswell Caves, Derbyshire; (*d*) Kent's Cavern, Devon; (*a*, *b*, *e*, *f*, *h*) France. *a*, *e*, *h* [$\frac{1}{3}$]; *b*, *c*, *f* [$\frac{1}{2}$]; *d*, *g* [$\frac{2}{3}$].

blunt—so heavy—of what use is it? Truly the man is a savage! So when he tosses the gnawed bone on to the floor and wipes his mouth with his hairy hand, they take him to a small branching cave where their own weapons are kept. Barbed harpoons, carved in reindeer horn (Fig. 11, *d*, *e*), and javelins, sharply pointed with the same material; bows, and arrows with flint or bone heads; spears and carved ivory spear-throwers[2]; these and others, carved and decorated,

[1] See p. 17, Fig. 4 (*a*).

[2] Similar implements are used to-day by the Eskimo of North America, the natives of Australia, and other primitive races.

he sees. Some he can guess the meaning of, others puzzle him. He picks up an arrow and compares its tiny, beautifully chipped flint head with his own massive, crude hand-axe, and smiles to see them together. Then with but two fingers and a thumb he snaps the arrow-shaft in twain—so much good is an arrow!—hand-axe for him! And the Magdalenians shrug their shoulders. Verily, the man is without understanding, even as a brute beast!

So they return to the main cave where, by the light of the fire, a man is sitting with a flint graver (Fig. 11, *h*) scratching on a piece of bone, and at his elbow a child watching him with an absorbed interest. Suddenly she claps her hands and cries out with delight. The Magdalenians crowd round him and look over his shoulder at the now finished picture of a reindeer. They nod approvingly, saying one to another, "'Tis he—'tis very he—the leader of the herd which yesterday we slew." And then, pointing, "My arrow struck him there." "Mine, there." "But 'twas mine behind the shoulder there, that brought him down."

Their eager interest brings the stranger into the circle, and he, too, looks but can see nought except a bleached bone with some meaningless marks upon it. The artist looks up at his puzzled face, then stooping quickly he seizes a bit of black charred wood at the edge of the fire and rubs his engraving with it. Then with a deft light sweep of his hand he wipes the smooth surface of the bone clean; and there, in black lines on the white bone, the stranger sees a picture of an unknown animal. His mind cannot grasp what it all means—Magic!

Other pictures they show him of different animals, life-like drawings on ivory and slate, on horn and pebbles; but they can see no gleam of intelligence in his eyes. The animals are all unknown to him. But when at last he sees the picture of a mammoth

engraved on a piece of mammoth tusk (Fig. 12, *g*), he greets it with pleasure at first; but later, with halting words says that it is wrong here, wrong there, not so should its tusks be curved, not thus should it be covered with hair. He is remembering the ancient straight-

Fig. 12.—Late Paleolithic art: (*a*) Engraving on bone, Cresswell Caves, Derbyshire; (*c*, *d*) carving in ivory; (*b*, *e*) engraving on pebbles, (*f*) on horn, and (*g*) on ivory; France.

tusked elephant of Chellean times, long extinct or ever the mammoth came.

While they are thus engaged, one by one the children have curled themselves down on skins placed round the walls of the cave, and have dropped asleep. Near them a woman is crooning softly over a baby at her breast, while round the fire other women, with strings of coloured sea-shells round their necks, sit

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skilfully sewing skins together with long, fine, bone needles (Fig. 11, *b*, *c*), discussing the while in low voices the stranger's shortcomings, mental and physical. And the sound of their speech mingles with the moaning of the night-wind at the cave mouth, where it sways the heavy skin curtain idly to and fro. Nothing of this strange home-life escapes the keen eyes of the hunter of the wilds, his alert senses note every movement. He sees a pile of brushwood thrown on the fire, and the flames dance gaily about it, and slowly it vanishes —whither? Mystery and magic are on every side, and his mind grows more disquieted at every turn.

But now the Magdalenians are looking at each other with questioning eyes—shall this strange man be shown the wonders of the secret holy places? An old man, to whom all the others defer, curtly nods his head. So be it then, that understanding may be given even to this savage.

The old man takes a burning brand and disappears into an inner cave, and there he lights a small lamp—merely a hollowed stone containing fat and a twist of dried moss for wick, but still a lamp. He takes it in his hand, and, appearing once more, he beckons; then the Magdalenians and the stranger, leaving behind them the cheerful light and life of the dwelling-place, follow him slowly into the dark, profound depths of the cavern. All talk dies away, and the silence is broken only by the sounds of their padding feet and heavy breathing. Fear and trembling fall upon the Chellean man, creature of the open as he is, yet still he follows the old man who has such power, it seems, that he can hold a shining star in his hands and make it do his will. Thus in an ecstasy of terror at length he comes to the wall-paintings. Suddenly he sees scores and scores of animals on wall and roof, drawn with such intense realism and virility that as the shadows flicker they seem to live and move in the dim light.

Yonder he sees an unknown beast, a bison, charging at him out of the shadows. No hiding is there to right or left in that narrow space. With a loud cry he turns and flees headlong from that place of enchantment and terrible magic; away, away down the passages, over the sleeping forms in the main cave, and so out—out into the friendly night of open, quiet, star-lit spaces. . . .

Such were the differences in attainment and outlook between the first and last great stages of Paleolithic civilisation; and to these may be added the fact that in the later stages man had also arrived at some religious conception of life and death. The burials found so often below the cave-floors from Mousterian times onwards show in their increasing ceremonial his belief in some form of immortality. Food, implements and articles of personal adornment were reverently placed beside the dead for their use in the life beyond; and the obsequies also included a funeral feast at the grave. A religious significance, to which we shall have occasion to allude later,[1] has also been ascribed to his realistic drawings of animals, as well as to the marvellous wall-paintings[2] so frequently found in the remotest depths of his caverns—depths which were never inhabited by man at any period.

Yet with these differences, as hunters they resembled each other in their cunning and their intrepidity. And when one thinks of their weapons, and of the animals which fell before them—mammoth, wolf, rhinoceros, grizzly bear, urus or aurochs, horse, bison and reindeer—their resource and their daring alike become almost incredible. And if the huger beasts were most probably first trapped in pits, still the task of slaying them even there would seem to modern man impossible with such weapons. Yet the charred bones of all these and many others have been found lying

[1] See pp. 103–4.

[2] See next page, Fig. 13.

beside their hearth fires. These fires show, too, that the larger animals were cut up on the spot where they fell (think for a moment what it must have meant to cut through a mammoth's hairy hide, not to mention cartilage and bone, with a small stone axe), and that the legs, head and neck were carried home entire, but only the flesh from the carcase, as that was generally too heavy to move. But their chief food was the young of the larger animals, for the obvious reason that they were easier to hunt, kill, and carry home, and, one suspects, the more savoury meal in the end.

Because Paleolithic men were hunters, they must in consequence have lived in widely separated groups or communities, dwelling during the later periods in caves where available, or in camps in the open country in default of such shelters.

FIG. 13.—The engraved lines in a wall-painting at Font-de-Gaume, France. [*After Breuil.*]

Now, in the wall-paintings there are certain figures, called tectiforms, which recur again and again, and are thought to indicate, by means of a sort of "short-hand" drawing, huts or tents made of logs and skins. But even without such corroborative evidence, it would seem that the rigorous climate of that time, especially at night, would make some sort of shelter imperative; more particularly if one remembers that man for thousands of years previously had habituated himself to the use of caves

and fires. Hence these open hunting stations scattered about the country and inhabited for long periods together, in all probability contained the first artificially constructed homes of men, and were the first dim foreshadowing of the hamlet, village, town, city, of later civilisations. Being so widely separated from each other, they must have been self-supporting and independent, and each in consequence under some form of self-government—probably patriarchal. And the participation of cave-dwellers and hut-dwellers alike in a common progressive culture proves that there was a considerable amount of intercommunication between them all.

It is certain, however, that the caves were the chief centres of the artistic and the flint industries, and that the people dwelling in them were always living in a higher state of culture than the rest; and also that it was from these centres that civilisation spread in widening circles to the outlying districts.

And since it is inconceivable that every man should have developed for himself all the diverse technical knowledge and ability requisite for the manufacture or production of the multifarious objects of later Paleolithic culture, it follows inevitably that he was impelled by the general growing needs and widening desires, by innate predilection, or by the sheer accident of birth and environment—the last, perhaps, most often—to pursue one or other of the several distinct activities of the times. In other words, the tendency to specialisation in man's industries, so universal at the present day, begins to be apparent even at this remote date. Paleolithic man became a hunter, or a fisher; a craftsman in horn and bone, or a worker in flint; an engraver of pictures, or a carver of ivory or stone; perhaps even a priest or medicine-man, or a miner sinking his shafts in the solid chalk, to obtain

thence the particular kind of flint used for the later implements.

But a craftsman cannot eat the arrow-heads or the spear-thrower, to produce which he has spent several laborious days; neither can the hunter kill his fleeing quarry with his hands alone. Yet the craftsman must have meat; and the hunter, weapons. Further, numerous necklaces of marine shells have been found in inland places hundreds of miles from the sea, and flint tools of all descriptions where flint stones are never found.

In conclusion, that being so, here then may be discerned the beginnings of exchange and barter among mankind; and, thus early, the establishment of the truth that trade routes from place to place are in very reality the highways of civilisation. Here, too, in this the most primitive of all civilisations, may be seen the first strands in the weaving of that web of the economic interdependence of society, which later on was to produce such wonderful patterns of human life—patterns of gold and duffel grey, of tinsel, and of drab.

PART II

CIVILISATION IN THE NEOLITHIC AGE

CHAPTER IV

The Step Between

At the very height of its attainment the Paleolithic civilisation of north-west Europe disappeared with seeming abruptness at the close of the Magdalenian period; and after an indefinite space of time, of which but little as yet is known, we find man living a different life and evolving a different civilisation from that of the Old Stone Age.

The commencement of this intervening period which lies between the old and the new civilisations coincides with the appearance of a temperate climate in these parts, a condition which has ever since prevailed. And in consequence of the change from the rigorous cold of the last phase of the Ice Age to a warmer but very wet climate, the physical aspect of the land was slowly transformed. Dense forests began to grow up and cover the hills, plains and valleys which in late Paleolithic times had been barren and treeless wastes like the steppes of northern Siberia at the present day. Those animals which had been abundant during the cold dry period, now disappeared: some became extinct, while others, such as the reindeer, musk-sheep, and arctic fox, followed the retreating ice-fields northwards. And except for the red-deer, wolf and a few others which had begun to appear a little earlier, this period witnessed the arrival of the first representatives of the fauna of modern Europe—among which we may note the roebuck, brown bear, wild boar, fox, badger and beaver.

But if we can speak thus definitely of man's changing environment during the transitional phase, it is otherwise with regard to man himself and the inception of his new civilisation; for our knowledge of both is as yet slight and fragmentary in the extreme. Indeed, until recently it was generally supposed that Paleolithic man died out or emigrated from north-west Europe, and that, after many centuries, it was again occupied by men of a new race and civilisation; but modern research has shown this "hiatus theory" to be no longer tenable. But before we proceed to consider this problem, it must be remembered that Britain did not become an island until early Neolithic times, although the process of land subsidence which ultimately brought that about, was at work throughout the transitional period. And we must picture the British Isles as a forest-covered peninsula, connected with the mainland on the south and east by a low-lying, densely-wooded isthmus which, as the waters of the North Sea and the English Channel encroached on it, grew narrower and narrower as the centuries passed by. The remains of these submerged forests can still be seen at exceptionally low tides in many places off the south and east coasts of England, the north coast of France, and the Channel Isles. And these old land surfaces have yielded the flint and horn implements of the transition, together with the bones of the temperate fauna which roamed in these forests when Britain was still joined to the continent. Thus it is but reasonable to suppose that in all north-west Europe the change in man's civilisation was caused by the same agencies, and consummated in a like manner. And, in consequence, all the evidences available, despite the country of their origin, are still necessary for a solution of this problem. Even so, it must be admitted that any theory put forward at the present state of our knowledge will probably need modification in the light of future discoveries.

With the close of the Magdalenian period, then, man forsook the cave dwellings which had been his homes for scores of generations, and, with few exceptions, never returned to them again throughout the whole of the transitional period. Such an absolute break as this with the habits and usages of untold centuries could only have been brought about by some untoward circumstance hitherto foreign to man's experience—by some powerful agency strong enough to revolutionise his way of life. And when, seeking an explanation, we consider that fact, we realise that although an individual may be forced out of the rut of habit by many things—passion, revenge, ambition, and the rest—such motives as these are not sufficient to move a whole community, much less a race of men. For the last, it must be something vaster and yet simpler, something which can touch all men alike and simultaneously, something which reaches down to the very root and fundamentals of their being. So the possibilities are narrowed down to three—death, or fear, or the struggle for existence.

But Paleolithic man did not die out; nor was he annihilated by a foreign invasion, or pestilence. Neither did he flee from his ancient dwelling-places before these calamities. No, the caves were abandoned in his struggle for existence under new conditions. It was, in fact, an economic crisis—the failure of the food supply.

As mentioned above, with the change of climate there was a vast disturbance of the balance of nature: the animals on which man had chiefly subsisted were deserting their old feeding-grounds and wandering farther and farther afield; some died out altogether. And though this sub-arctic fauna was eventually replaced by that of a temperate climate, the coming of the latter would of necessity be irregular and intermittent, as the natural conditions could at no time

have suited both classes of animals. The arriving roe-deer did *not* tread on the heels of the departing reindeer. Thus it was that man was forced to take to the open and resume the roving life of Chellean man, wandering hither and thither in the track of animals which became scarcer and scarcer as the years went by. And it was well for him that the dearth of food was caused by a milder temperature, and not by a severer and intenser cold, else perhaps had the tale been very different.

We have previously seen in Solutrean times what was the effect on man's art of only a partial resumption of an open-air life, at a time when game was plentiful and hunting communities camped in more or less permanent settlements. Even under such favourable conditions art was only just kept alive, and only by those who still remained in the caves and carried on the tradition. So it is with no surprise that we find now, consequent on the complete abandonment of the caves, and the stress and strain of an open-air life spent in search of a dwindling food supply, that the marvellous art of the late Paleolithic Age entirely disappears in north-western Europe.

Such an existence would in itself seem to be a sufficient cause for the dissipation of all artistic impulses. But there was just possibly another factor which worked to the same end. The retreat of the reindeer to the north, being never more than two or three miles each summer, was so slow that the men who hunted them might have been insensibly but surely withdrawn farther away from their old hunting grounds as the years went by, until this movement had resulted in an involuntary emigration of such of the cave men as by long habit had become the most dependent on the reindeer for their food, their clothing, and the raw material of their implements of horn and bone. However that may have been, man at this time, both by

reason of the continual search for food now imposed on him, and the lack of his accustomed raw material of ivory, reindeer-horn and bone, was compelled to put aside all thought of artistic production—carving, engraving, and the like—and work only for sheer use and efficiency. This is most noticeable in the harpoons he fashioned (Fig. 14). These are clearly derived from the beautifully carved reindeer-horn harpoons of Magdalenian times;[1] but now they are made of red-deer horn, which cannot be carved into such shapes as reindeer horn allowed. Yet, though made of a worse material, and having less finish and beauty, these harpoons are really more efficient for their purpose, in so much that now they usually have a hole bored through them at their hinder end for the secure attachment of the thong or cord; whereas in the older forms the string was merely tied round the stem — a method not nearly so mechanically perfect.

Fig. 14.—Harpoons of the transition: (*a*) Oban, Scotland; (*b*) Newcastle; (*c*) Mas d'Azil, France [½].

These harpoons, by their number and their widespread diffusion, are further evidence of the straits to which man is now reduced. More and more is he relying on fish for food in default of game. And that inevitably implies that he must spend more and still more time to get enough food to keep himself alive, and those dependent on him. A reindeer brought down in the chase used to mean abundant food for a whole family for three or four days. But what is one fish

[1] See p. 37, Fig. 11 (*d*, *e*).

among so many? Thus, despite the probability that harpooning was not the only method of fishing employed, long weariful hours now must be spent on the river-bank, every day, week in and week out, to supply the many mouths he needs must fill. Such conditions as these would leave no time for art or skilful craftsmanship. Shell mounds—his "kitchen middens"—on the sea-shore tell the same tale; and in one of the caves which a small community inhabited for a time during this transitional period, there is proof that they were reduced to ranging the woods in search of the wild plums, or sloes, and wild cherries, hazel-nuts and acorns, to eke out their sparse diet; and layers of innumerable snail shells found there, all point to the same fact—a restricted supply of customary food and an appetite sharpened by want now grown omnivorous.

Thus we find these descendants of Paleolithic man haunting the rivers and the sea-shores, and widely dispersed in tiny groups over the face of the land, each group jealously guarding its own particular little food supply against all comers. Small wonder, then, if for a while there is no apparent progress in civilisation; nay, more, if man seems rather to be slipping back towards savagery. Yet even so, there are signs that his mind was tenacious of old things, and in his few flint implements the traditions of Magdalenian culture still persisted, though in feebler and more degenerate forms.

But the darkest hour precedes the dawn; so with a settled climate now definitely temperate, and with the complete afforestation of the land, man's lot was slowly ameliorated: the new animals increased in numbers both by the natural process of multiplication and by further immigrations; and thus the problem of food became gradually less acute.

Yet at first sight it seems strange that, though we know that man hunted and slew these animals for food

there is very little, if any, evidence as to the weapons he used. We know that he was provided with harpoons for fishing, and that his flint implements were of the small Magdalenian types, such as scrapers and borers and tiny knife-blades—practically all of them tools; but recognisable weapons are wanting. This may be accounted for by the fact that wood, which had been extremely scarce during the steppe period of Paleolithic times, now became abundant, and yielded him on every side a raw material which could be more easily worked into weapons and implements than stone, horn or bone, and also more readily replaced if broken or lost. Hence it would seem practically certain that man once again is using wooden weapons—very different, of course, from those of pre-Paleolithic times—the chief now being bows and arrows; the latter tipped with bone, or, it may be, flint. And it is only because such weapons are by nature perishable that no remains of them have been found.

Fig. 15.—Painted pebbles, Mas d'Azil [⅔].

Now slowly and imperceptibly new forces are at work in the land. And new and strange ideas first caught by contact with other races to the east or south-east spread slowly to the north-west. The first effects of these are perhaps seen in a curious and, at present, inexplicable form. In certain places—notably at Oban in Scotland, and Mas d'Azil in France—numerous small round pebbles have been discovered, which have been painted with a variety of bands, spots, and irregular patterns in red or brown pigment (Fig. 15). Similar

devices have also been found painted or engraved on the walls of one or two caves which had been occasionally occupied at this time. In spite of wild guesses their significance remains a mystery, but being peculiar to this stage of man's development, and apparently unrelated to anything either before or after it, we must just pause to notice them and then pass on. The case is very different, however, as regards pottery, the first use of which—though just possibly occurring in late Paleolithic times—is generally ascribed to the transition. We can understand the meaning of the broken bits of earthenware found among the remains of this period. And primitive as such pottery was, being crudely moulded by hand and imperfectly baked by the fire, we can realise how great an advance on the earlier domestic economy is implied by these fragments of cooking-pots and vessels for holding liquids. Further, here and there, stone implements begin to show signs that they have been brought to an edge by grinding—a mechanical process now applied to stone for the first time, but one which in Magdalenian times had been employed in the manufacture of bone implements. These innovations almost certainly preceded any immigration of those races among which the beginnings of Neolithic civilisation are supposed to have originated.

Such immigration, if it happened at all, which is denied by some authorities, was in all likelihood a slow process occupying a considerable period of time. In which case we may picture a series of more or less amicable settlements in the country, followed by intermarriage between the new-comers and the old inhabitants; the latter being only too glad, one would think, to welcome and profit by the new ideas and wonder-working inventions which the new-comers brought with them. That there was no inimical invasion followed by the annihilation of the descendants of Paleolithic man is suggested by the fact that they

transmitted to their offspring in the Neolithic Age certain peculiar physical characteristics — as, for example, the distinctive long-shaped skull—which, despite many subsequent invasions of our land by different races, have been handed down from generation to generation throughout the intervening ages, and are still to be seen in the majority of the British population at the present day.

But whether there was immigration at this time, or not, the new influences undoubtedly came hither from races at a higher stage of development than ours; and these influences gradually penetrated through and through the continent in all directions, until, in this remote north-western peninsula, now called the British Isles, the new light is seen at last. And thus this dark transitional period of struggle and trial melts insensibly into the pastoral and agricultural civilisation of the Neolithic Age.

CHAPTER V

Discoveries and Inventions

In all our attempts to visualise the growth of man's civilisation in prehistoric times, it must not for a moment be forgotten that we are looking at his development in a kind of temporal perspective wherein these early stages of his progress are dwarfed by their utter remoteness—even if compared, for instance, with the Norman conquest of England. Yet, putting aside the inconceivably vaster period of Paleolithic time, the Neolithic Age now about to be considered, though but comparatively short in duration, apparently lasted in this country from eight to ten thousand years. And if we remember that all which has happened since the Norman conquest has occupied a space of time about one-tenth of the probable length of the Neolithic Age alone, we can then realise something of the immense time which was necessary to move our early forefathers one stage forward in civilisation.

Neither must it be forgotten throughout this work that no stage of man's progress is capable of hard and fast delimitation; that is to say, there is no abrupt division between any one period and those immediately preceding and following it. Thus civilisation does not really proceed by means of a series of ascending steps or stages, but rather by a more or less slow and continuous rise—as it were along a gradual incline—with occasional set-backs. So that if we are obliged, as aids to memory and classification, to divide such

progress into several separate stages, and to label them with this name or that, it does not follow that what is called the characteristic culture of any one period is peculiar to it alone. Hence we find in the Neolithic Age, which is the age of the polished stone implements, that Paleolithic forms and technique persisted for a long time, and, indeed, were used contemporaneously and side by side with implements of distinctive Neolithic technique. And, as will be seen later, these polished stone implements in turn continued to be used in the subsequent period, called the Bronze Age, long after the introduction of metal. Thus, although we may use dates and labels for convenience, both of them will become stumbling-blocks if we fail to realise that the fact underlying all progress of civilisation is *not* the change, sudden or slow, from this implement or activity to that, but growth—the mental, moral, and spiritual growth of man—the continuous and imperceptible development from the simple to the complex, of man's needs, desires, outlook, and life.

It was not until some time during the early Neolithic Age that Britain was eventually separated from the continent by the complete submergence of the connecting forest lands on the south and east. And about the same time, and by the same process, Ireland and the Isle of Man likewise became islands on the west. This process, as we have seen, had been going on for thousands of years. Indeed, it had been so slow that the encroachment of the sea was hardly noticeable in a lifetime. Thus Neolithic man in Britain did not realise that he was being severed slowly, but inexorably, from the mainland ; but even if he could have done so, the profound importance of that fact would, of course, have been entirely hidden from him. Nevertheless it is solely owing to this geographical separation that, from this date onward, British civilisation becomes in

many ways peculiar to our country. This, while very obvious in what are called historical times, begins at once to be apparent even in these early days; and we can see the effects of this separation in the tardy development of our civilisation when compared with that of the continent, and also in certain distinctive aspects of it. But whether such insularity has tended on the whole to our loss or our gain—not politically as a nation, but socially and economically as a people—this can only be ascertained by a comparative study of these matters in the histories of other countries.

At the time when Britain thus became an island dense forests extended inland from the sea-shores, covering all but the higher hills. Willows, elders, and birches throve in the valleys where marshes and lakes spoke of blocked drainage, oftentimes the result of dams built across the streams by beavers. In the drier soils oaks, ashes, yews, and Scotch firs flourished, while in the forest glades dense hazel thickets harboured innumerable squirrels. Bilberry and cranberry bushes and heather ran riot on the high windy moors; and in the downlands yews and junipers were massed in the hollows, leaving the heights to tracts of grass and low gorse scrub. The animal life, too, was the same as at present, except for the Irish elk, or deer, which in England became extinct towards the end of this period, and the wolf, beaver and a few others since exterminated or departed. Such was man's environment during the Neolithic Age, and such it continued to be with but little change until the Romans came.

As for man himself, all his skeletal remains as yet discovered show that he had retained many of the physical peculiarities of late Paleolithic man. Thus we must picture him to ourselves as not essentially different from modern man; with a long-shaped head, but not more so than is the case with great numbers of present-day Englishmen who have inherited

this cranial characteristic from him; having the average modern brain capacity, but rather more delicate features, with a dark complexion and black hair. Men presenting *all* these features are still to be found in the remoter parts of the British Isles. Yet another physical characteristic may be mentioned: the bones of his ankle and foot were stouter than ours, and had more extensive joint surfaces. This means freer movement in running and climbing over uneven or rocky ground; and our deterioration in this respect is doubtless due to the long-continued use of boots and to artificially made roads. This race of men was common to all western Europe, but during this period at least two different races, with rounder heads, appeared in central Europe slowly moving to the west. But though they had reached the coasts of France and Belgium some considerable time before the end of the Neolithic Age, no representatives of these new races found their way to England until this period was drawing to its close. For this reason all discussion of them is better postponed to a subsequent chapter.

The earliest dwelling-places of Neolithic man in England—other than caves, which still continued to be inhabited[1]—were small clusters of huts in the uplands. These huts are called "pit-dwellings," because of their peculiar formation. They were made by digging a circular hole about four feet deep and ten or twelve feet in diameter; the earth from which was thrown up into a rampart or wall all round, thus adding another two or three feet to the interior height of the wall except where a small gap was left in it for entrance. Then, firmly bedded in the top of the earth wall, large branches or poles were sloped upwards and inwards till they met in the centre, where they would be bound strongly together, thus forming the posts of

[1] As at Kent's Cavern and the Torbryan Caves in Devon, and elsewhere.

a conical roof. But probably, in the smaller dwellings, straight, pliable branches were bent over from side to side like half-hoops which, crossing each other in the centre, would form domed roofs. In either case, small branches would then be woven basket-wise in and out of the roof-posts, and the interstices between them filled in with heather or moss; the whole, as a further protection against the weather, being probably covered with skins, except for a smoke vent, where the roof supports met together in the centre. As a number of these pit-dwellings seem to date back to the transitional period, it is possible that they were derived from the dwellings of the open-air hunting stations of late Paleolithic times.

Living in these pit-dwellings,[1] and in caves in the uplands, we see man slowly learning and practising the new ideas which are spreading from settlement to settlement throughout the land. The domestication of animals now engrosses his thoughts and fills his days with strange activities.

The first animal to fall under his spell, never again to be happy save in this new and wonderful relationship to man, was the dog. We know, from the remains of Paleolithic hearth-fires, that in those days man killed the wild dog for food; but when or how he was domesticated is not definitely known. It almost certainly occurred during the transition, in many different places, but in much the same way. He was perhaps one of a litter found when his dam, fighting to the death, had been killed by some hunter who, seeing his funny playful ways, and thinking maybe of some little lonely child at home, spared the puppy and carried him to his hut to amuse that little one. And the puppy, growing up, somehow adapted himself to his

[1] Among the many places where Neolithic pit-dwellings are found in this kingdom, are Hayes Common and West Wickham, Kent; Crohamhurst, near Croydon, Surrey; the Hampshire Downs; Waybourne, Norfolk; and the Yorkshire Wolds.

new surroundings, and revealed to man such potentialities as early, very early, made him worth his keep. Thus, even as a puppy, he had oftentimes risen from the hearth bristling and growling at the approach of some strange foot; and inevitably at first had been misunderstood and cuffed into silence; but it was not long ere man—owner and prowler alike—came to appreciate the full significance of those warning growls. Very soon, too, because of his sense of smell and fleetness of foot, he became invaluable in the chase; and when one day it happened that man found in him an unexpected ally in defence against some creature of the wild—when once man had experienced his help in time of need, the dog's place in human affairs became doubly assured. Thus for reasons of sheer expediency at first, and not of sentiment, the bargain, as it were, was struck between man and dog; and however the case has since been with man, the dog at least has not been found wanting, but has played his part in all the faithfulness of his noble heart. In return for food, shelter, and a place beside the fire, we early find him hunting with man by day, and by night guarding his possessions against marauding beast or prowling thief.

As man further extends his sway over the animal world, and domesticates species by species, horses, cattle, sheep, goats, and pigs, the dog takes on new duties, and with a cunning only less than human, drives and herds and guards his fellow-beasts at his master's commands.

But these are but a part of the many diverse activities which now are centred in the pit-dwellings. Besides the breeding of flocks and herds, man, in this place or that, is beginning to learn the rudiments of agriculture. The cultivation of corn has been of such enormous economic importance in the history of mankind, that at first sight it seems strange that the place of its inception is unknown. It has been ascribed to the valleys of the Tigris and the Euphrates, and

also to the Nile valley; while other authorities think that it originated in central Europe. But wherever it began, there is no doubt that this practice came hither from the East, possibly before Britain became an island, either with the Neolithic immigrants, if such there were, or by the gradual westward spread of this new custom—precious handfuls of corn, already not a little improved on the wild species by cultivation, being bartered from tribe to neighbouring tribe with each returning spring.

But at the same time it is not improbable that in certain places, here or on the mainland, other tribes, hearing of the wonderful results of this new practice, and being unable to obtain such partially cultivated grain, tried to make use of the seed of other wild grasses, and experimented with their cultivation. For although wheat and millet were most widely grown in the Neolithic Age, several of the other cereals which we now have were also being raised on the Continent, and possibly in this country also.

Let us watch for a moment a Neolithic farmer in Britain at work in his little fields. He first breaks up the soil with a pointed digging-stick—much the same as those used to-day or but yesterday in many parts of the world by races still in the Neolithic stage of civilisation; using also, as occasion may arise, a pick of roughly chipped flint or of red-deer antler (Fig. 16, *b*), and the flat, broad shoulder-blade of the ox as a spade (Fig. 16, *a*); for the latter tools have actually been found in the flint mines of this period. And on the ground thus prepared he scatters the grain broadcast. After the sowing of the corn, we can imagine with what interest and expectation he watches his little crops growing and ripening to the harvest, and with what joy he goes to the reaping. Though it is such a crop in ear and stalk as modern farmers would plough into the ground contemptuously, or, at most, turn their cattle into—

a crop thin and bare in patches, scarcely reaching as high as his knees—yet it is very precious and marvellous to him. Stripped to the waist, bare-headed and bare-legged, his swarthy sweating back gleams in the sun as he bends to his task. In his right hand he grasps a sickle, made either of flint chipped to a slight curve, about eight inches long (Fig. 16, *c*), or of a curved piece of wood set with tiny sharp flint flakes something like the teeth of a saw; and with his left he seizes a handful of corn-stalks and severs them with a sawing motion of the sickle just below the ears, which he then places on one side. And so he labours on, and handful by handful reaps his heaven-sent harvest. Later, on a windy day, he carries the harvest to the open-air threshing-floor—a flat, hard, sun-baked, earthern floor, on which the ears are thrown; and there he beats the grain out of the husks with trimmed, pliable, green branches. Then with his bone shovels he casts the husks and grain together into the air that the wind may carry away the chaff, while the heavy grain falls back again on to the floor. When the grain has thus been cleansed by winnowing, he stores it away in earthenware jars until it is required for food, or, in the following spring, for seed.

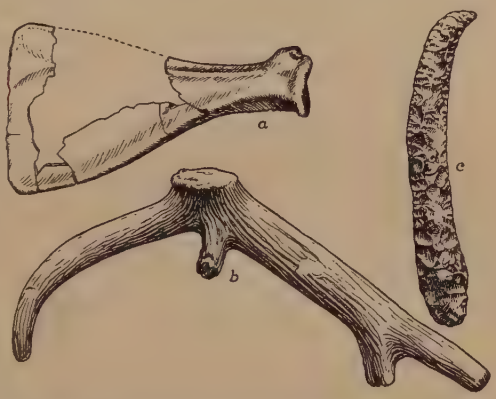

Fig. 16.—Agricultural and mining implements: (*a*) Cissbury, Sussex [$\frac{1}{8}$]; (*b*) Grime's Graves, Norfolk [$\frac{1}{8}$]; (*c*) Thames, London [$\frac{1}{8}$].

So from year to year this artless round of activities went on; and their very continuance proves that their results were sufficient to encourage man to persevere; and, also, that he made momentous discoveries in doing so. One difficulty must have arisen early. He saw trees, bushes and plants thriving year by year in the same place, so naturally he sowed his corn year after year in the same little fields; and, then, as those properties in the soil necessary for the growth of the corn became exhausted, he must have been sorely puzzled at the falling off of his crops. Still, however, he went doggedly on, until one year the chance addition of a new field to those already so long under cultivation, brought about an unexpected and startling result—the new field bearing twice or thrice the yield of the old. Through the long winter nights he ponders this fact by the side of the fire. But even so, he does not ask himself why. That mental attitude to natural phenomena was not as yet. "Why?" was the birth of science, and science was a very late achievement of civilisation. For Neolithic man things *were*, and he acted empirically always. So when the next year brings the same result, it becomes evident to him that corn somehow grows better in the new place; and, for that reason alone, in the following year he clears and breaks up more land there, with the consequence that his harvest is more abundant than ever. Thus the old fields are gradually given up, and every few years fresh land is brought under cultivation; and for a time it becomes established that virgin soil produces better crops than worn-out soil. But this necessarily takes him further and further away from his homesteads—a great inconvenience at those times. So, presently, by sheer accident, the discovery is made that exhausted soil which has lain fallow for a few years becomes fertile again. Later still, as a result of the grazing of his flocks and herds in the fields, he discovers

the value of animal manure in fertilising the land. And with this knowledge a great step is made in agriculture. Consequent on better and wider cultivation, the harvests became more and more abundant; yet still the work in the fields proceeded in much the same way as we have just seen, save that the grain was now stored in pits, smaller than the pit-dwellings, but roofed over in a like manner. Again, probably in Britain, and certainly on the Continent, the wild fruit trees likewise attracted man's notice, and he planted them near his homes; and soon, freed from the struggle for existence, they began to bear more abundantly than before.

But it was not only in the neighbourhood of the pit-dwellings in the uplands that agriculture and cattle-rearing were practised. Man very early had also begun to build his homes here and there at the edges of lakes and rivers, where, surrounded by the marshy ground, he would be naturally protected against attack. In these places he erected platforms, as at Holderness, in Yorkshire, by covering the marshy site with a deep layer of brushwood, on which in turn he laid the trunks of trees. Pointed piles, driven firmly into the lake-bottom, held these timbers in place, and on this structure he then spread smaller branches and brushwood, which, when trodden down with earth, made a more or less firm floor raised well above the level of the lake. On the floor thus obtained he built his huts of wattle and daub; that is, of upright poles interwoven with small branches and covered with mud from the lake—a primitive form of lath and plaster; and roofed them with thatches of reeds previously gathered from the lake-side and dried in the sun, or with turves cut from the marsh. A number of these huts were built on one large common platform which, from its size and the labour required for its erection, must have been the result of the common effort of the

community. This likewise applies to the encircling palisade by which the whole little settlement was further protected from man and beast. These homes of Neolithic man are called "lake-dwellings" to distinguish them from the "pit-dwellings" of the uplands.

The people of the lake-dwellings had likewise their patches of cultivated ground in small clearings of the surrounding forests, and also their domesticated animals; but, as one would expect from such a situation, fish caught by net and hook was an important article of their food. It is likewise in such places that we find the first direct evidence of man's use of boats or canoes.

This practice may very well have originated under similar conditions in different countries more or less contemporaneously. Men who constantly resorted to the water-side for the purpose of fishing would sooner or later find logs floating in the water, and discover that such logs would bear their weight, and before long they would be making little voyages sitting astride floating tree-trunks, using feet and hands as paddles, and, a little later, using roughly-shaped wooden paddles. We have seen how man, during the transitional period had subsisted to a very great extent on fish; hence it is probable that such rudimentary navigation was practised at that time. But whether it began in the transition or in the early Neolithic Age, at first sight there does not seem much connection nowadays between that skin-clothed man sitting astride his buoyant log and paddling a slow erratic course across a large pond or stream, and this floating steel town which we call an Atlantic liner, now crossing five thousand miles of ocean in five days. Yet, as surely as his blood is now running in our veins, so surely can the development of this huge and complex modern liner be traced from that moment when that man set his body perilously afloat on a drifting tree-

trunk amid the laughter and wonder of his comrades—laughter which, beginning with his spasmodic contortions in the effort to retain his balance, culminated in a shriek at his inevitable ducking, and wonder that such a thing was any way possible.

We cannot say definitely which of two was the earlier development in the evolution of the boat. If stability, or balance, was the first problem to be solved, this could very easily have happened, following on the discovery that two logs or trunks lashed together are uncapsizable. Little thought would be necessary to lead from that to the shaping of a tree-trunk, so that when floating on the water its base would likewise be broadened and flattened, and its height correspondingly reduced. Then, probably imitating the depression between the two trunks, man began to hollow out this shaped log by fire and chipped flint adzes—the adze being one of the earliest tools of Neolithic times. If, on the other hand, the log was hollowed out before it was made stable, almost any willow, hollowed by decay and fallen by the water-side, was enough to give man the idea of sitting inside the log and not astride it. But the problem of balance would remain, and prevent its general use until man thought of flattening its base. Thus, or thus, the dug-out, flat-bottomed canoe or boat originated, and it remained in use in Britain until Roman times.

By the middle of the Neolithic Age, then, it would seem that man is actively engaged in the rearing of flocks and herds, and also in agriculture, though not so extensively; that he builds himself huts, barns for his produce, and shelters for his cattle, and has mastered the rudiments of navigation. Activities such as these cannot have failed even at their inception radically to change man's whole outlook and mode of life. No longer is he the sport of nature, precariously dependent for his entire food supply on hunting and

fishing, and therefore leading the more or less wandering existence which such pursuits necessitate. Now, with the practice of agriculture, and of the breeding of animals, man, like one of his own trees, has rooted himself in one spot; there he lives his whole life, and dies in the place where he was born. And whereas the tendency of hunting is always to segregate men, now, by reason of these new pursuits and interests, and others to be considered later, they have been drawn together, and tiny villages have arisen in the uplands and by the water-side alike, and are occupied permanently.

But these, though perhaps the most general, are not the only permanent settlements of Neolithic man. As we have seen, he also inhabited caves in places where the limestone formation of the locality made that course possible. But in other districts, where stone was abundant, timber comparatively scarce, as in Cornwall and elsewhere, he devised yet another form of dwelling wholly made of stone, towards the close of this period. These dwellings are called "beehive huts," because their shape approximates to that of the old-fashioned, straw-covered beehive. They were usually circular buildings of "dry" stones—that is, of stones laid without mortar or cement—each course, or layer, being stepped back a little when seen from the outside, while from the inside each course is seen to overhang the one below it. In this manner the space within the hut grew smaller and smaller as the wall was raised, until, at the apex, a single stone was sufficient to complete the building. Such buildings were necessarily small, with a floor diameter averaging from ten to twelve feet, and a height from the floor to the apex of the roof much about the same. The tiny doorway, probably not more than three feet high, would be the only break in the wall; and, having no windows, the hut could thus be easily defended against attack. Built of dry stone in this way, the hut must have been a

draughty, uncomfortable dwelling, unless, as is almost certain, the crevices and crannies between the stones were filled with moss and earth, or the whole hut lightly covered with soil. It is incredible that men who had the capacity for building, and to whom shelter from the weather had become necessary, should not have thought of some simple expedient to make his huts wind-proof as well as rain-proof. Further, in the construction of his chambered barrows—of which more later—he did heap earth over his stone-built structures, some, at least, of which were built on the same principle; so he must have known by experience that its effect was to make the chamber snug and warm. Hence, probably, in appearance the beehive huts were domes of grass-grown earth like gigantic mole-hills.

We find, then, that Neolithic man inhabited at least four different types of dwellings according to the natural features of the localities in which he settled; and that the dwellings he built were customarily clustered together in small villages, in each of which only one type of hut would be found. But whatever the kind of dwelling, its inhabitants seem to have shared in the common culture of the time. And it must now be our endeavour to picture the life which went on within its walls, and to trace the various activities of which the Neolithic home became the centre.

Partly from the implements, and partly from other evidences of man's industries, we are able to ascertain something of the domestic economy of this period. Querns, or stone hand-mills, show that the grain which had been harvested in the little clearings was afterwards ground into flour for bread. The flour, mixed with a little water, would be made into small flat batches or cakes of dough, which, when baked in the hot ashes of the fire, resulted in a hard, coarse bread, probably something like a ship's biscuit. The use of

milk as food soon followed the domestication of cattle, goats, and sheep; and from that to the making of butter and cheese was a natural, if, in the first case, an accidental step. Skin bottles and pottery would supply all the utensils necessary for primitive dairy work.

We have seen how pottery began to be made as early as the transition, if not indeed earlier, but the shapes of those vessels cannot be ascertained from the small fragments of them which have been found. With Neolithic pottery it is different, for we have a few unbroken examples, as well as numerous large fragments of it. The most distinctive shape is a bowl something like a modern pudding - basin, but round-bottomed, and having a hollow moulding just beneath the rim (Fig. 17). These bowls were shaped by hand, and were generally ornamented with simple patterns: by incised lines arranged in herring-bone fashion, and by grouped impressions made in the wet clay by means of the finger-nail, twisted cords, and shells; but such decoration was usually confined to the upper half of the bowl, though the inside of the lip was sometimes likewise ornamented. But however they were decorated, the hollow moulding between lip and shoulder remains their most striking feature. Hence, as these bowls

Fig. 17.—Neolithic bowl: Thames, London [⅛].

were used for cooking food, their rounded bases being plunged into the hot embers, and as they had no handles by which they could be removed from the fire, it is practically certain that this hollow moulding was utilitarian and not decorative in origin. Thus a thin, pliable, green branch could be looped round it, and by this means the bowl could be put on and taken off the fire at will, without burning the hand. But while these bowls were certainly indigenous and characteristic of British Neolithic pottery, another type of pot, derived from continental forms, began to appear in this country towards the close of this period—introduced, probably, by the first round-headed immigrants before alluded to. This is the beaker, or drinking-cup; in shape, tall in proportion to its width, narrowing slightly from the mouth downwards to about midway, then bulging out and narrowing again at the base (Fig. 18). These also are made by hand, and are simply ornamented, being often pitted with shallow holes in an arranged pattern, or banded with incised lines.

Fig. 18.—Late Neolithic beaker: Peterborough [$\frac{3}{8}$].

The making of the pottery in common with the care of the fire, and the maintenance of the fuel supply, the drawing of water, the grinding of corn, the dairy-work, the preparation of meat and bread, and the cooking and baking, was woman's work; but that was

not all. The making of baskets, in principle the same as the wattling of the huts, and thus probably derived from it, was also their work. Such was the case, too, with the weaving of cloth, another Neolithic invention. Here, again, the principle involved is exactly the same as that of the weaving of baskets, and was derived from it in turn; coarse threads being substituted for twigs, just as the twigs of the baskets had earlier copied the interlaced branches of the wattled huts. Spindle-whorls of pottery and stone, for the spinning of threads, have been found here in great numbers, and, on the continent, tiny fragments of the cloth itself. This cloth was made of flax, which at this time was generally cultivated; but, as well as linen cloth, it is possible that, with the increasing domestication of sheep, wool also was beginning to be woven into cloth before the end of this period. Women, as well as weaving the cloth, would be the first to wear it, for men continued the use of skins for a long time, as being better suited to the hard wear and tear of an outdoor life.

But while the women's multifarious duties were carried on in the immediate neighbourhood of their homes, the men's work mostly took them further afield. They had to tend and guard their flocks and herds, and wage unceasing combat with the wolves of the surrounding forests. They tilled their little fields, and had perforce to fence them round to keep out the herbivorous animals of the woods from their growing crops. In the water-side villages much time was spent in fishing; and they were all hunters of game, with which to supplement their larders, for, as the remains of their hearth-fires show, venison was eaten more frequently than beef or mutton.

There are but few other records which throw any light on the home life of the average individual or family at this time. But the remarkable evidences of

the practice of surgery in the late Neolithic Age must be noticed in conclusion—both by reason of the fact itself and of all that it implies. A cave has been discovered in France, which had been used as a sepulchral chamber at this time. And there, among the remains of over one hundred and twenty individuals, eight skulls were found on which the operation of trepanning had been performed during life—an operation of the most difficult and delicate character, even for modern surgeons equipped with all the latest resources of science. And yet, in the majority of cases, these Neolithic operations had been successful. Indeed, one skull had been trepanned in three places, and the patient had lived and recovered after it, for the edges of the bones had healed over. But not only in France, in England also this operation was performed at times, and three or four examples of it have already been placed on record. The reasons for this operation are unknown, but most probably it was undertaken subsequent to an injury to the bones of the skull, or perhaps to relieve chronic or excessive forms of headache.

But, whatever the reasons that prompted it, such an operation proves with what wonderful skill and dexterity these men could use their poor flint implements; and reveals, too, in a startling manner, the mental attainment of the late Neolithic Age, which was capable of thus conceiving and carrying through an undertaking marvellous at the present day, but at that time almost beyond belief.

CHAPTER VI

Primitive Economics

THE change in man's existence from hunter to farmer, while obviously of incalculable importance for all subsequent civilisation, was the result of economic pressure alone. And although the Neolithic Age did not in fact witness the final stages of this change, it had proceeded so far by the end of this period that its completion was only a matter of time.

A moment's thought will show that a country in a natural state can support only a limited population which lives by hunting. This is the earliest of all economic phenomena. For if the hunting grounds are depleted of game beyond a certain point, future scarcity must ensue—there being no artificial means by which that particular food supply can be augmented. Thus, beyond that point, the game may be regarded as the equivalent of modern capital which must not be tampered with. Ultimately, therefore, such a population is strictly limited by the natural rate of increase of the animal life on which it is dependent—by the interest on the capital. And it is not until, with the progress of civilisation, other sources of food are created or discovered that the land can be made to support a larger population. And, even then, only as these new sources are more and more fully exploited can the numbers continue to grow.

Thus, because the existing remains of the Neolithic Age and their widespread dispersion together prove

that there was a considerable increase in the population of Britain during this period, such an increase could only have been made possible by the creation of food supplies unknown to Paleolithic times. And as the evidence of Neolithic hearth-fires shows that man could and did still provide a great proportion of his food by hunting, it is apparent that pasturage and agriculture were first practised only as a means of supplementing inadequate natural resources. But as time passed on and the Neolithic Age drew to its close, this natural food supply—the wild life of the forest or marsh surrounding man's little homesteads—dwindled in inverse ratio to the still increasing population; and the artificial production of food became more and more essential to man's existence, until, in the following period, the transformation from hunter to farmer was—as we shall see—finally completed.

Agriculture and pasturage, however, were not the only economic or industrial developments of the Neolithic Age. There were others, presently to be considered, which were inextricably involved with them. Civilisation, no matter how primitive, is a living organism, all parts of which are interdependent, each reacting on the other. Hence it is, that if and when its equilibrium is disturbed by one part beginning to function in excess of the normal, other parts are energised in sympathy until the balance is once more restored, or, it may be, even reversed, necessitating further readjustment. Thus the whole economy of civilisation rocks into growth, and development instead of being lopsided becomes general.

The stone implements of the Neolithic Age, for instance, show in themselves such obvious evidences of development that, too frequently, they have been studied as though they were examples of self-evolved progress unrelated to anything else. But we have only to reassociate their manufacture with the other

unfolding and expanding activities of that time to realise how this law of mutual interaction and reflex stimulus affected them all—how new implements were called into being by new conditions of existence, and then, improving, bettered them in turn. And with this thought in mind we must now proceed to examine this industry for what it has to reveal.

Neolithic stone implements, in design and technique, are, in general, much superior to those of the Paleolithic Age; and although to a certain extent derived from them, they are more highly specialised and better adapted in every way to man's growing needs. The new process of manufacture, that of grinding—the first indications of which were seen towards the close of the transition—now becomes increasingly practised; and by this method implements are made of many kinds of stone which could not be worked into shape like flint by chipping and flaking; so that now we find basalt,[1] felstone, sandstone and diorite—to name only a few—are used as well as flint, as the raw material of their weapons and tools. Some kinds of stone more readily take on a smooth surface than others, and implements made from them are often described as being polished; but both grinding and polishing are the results of the same mechanical operation, and are more or less synonymous terms. But, in addition to chipping and flaking, grinding and polishing, there was yet another process which, though discovered later than those, was also extensively employed in the manufacture of stone implements. It was found that pieces of hard volcanic rock could be shaped by pounding them with a blunt-pointed instrument—each blow reducing a tiny area of this rock to powder, which, on being wiped or blown away, left a little dint on its surface. This process is now known as "pecking." And although countless thousands of blows would be

[1] See p. 82, Fig. 22 (*f*).

necessary to work a piece of rock into a desired shape, yet they could be delivered so rapidly with a well-balanced, pointed stone hammer that something like two hundred "pecks" a minute was probably the average rate of working. Thus this operation of crumbling away the stone, though obviously a lengthy one, was in all likelihood not more so than that of grinding.

As may be supposed, man's new industries, and his use of new raw materials and new processes for the manufacture of his stone implements, resulted in the appearance of weapons and tools, many of which are seen now for the first time. Nevertheless, the most characteristic and best known of them all can be traced back to Acheulean, and even to Chellean, forms. This implement is the stone axe-head, known to archæology as the "celt."[1] But, in passing, as a certain number of adzes which approach the axe in shape are also included under this type-name, it should be noted that celt and axe are not necessarily the same thing. Broadly speaking, however, the celt was an axe, and as such was used indifferently as weapon and tool. Ranging from almond-like to chisel-like form (Figs. 19, 20),

Fig. 19.—Neolithic axes, or celts, of flint, showing different forms and degrees of finish: (*a*, *c*) Mildenhall, Suffolk; (*b*) Thames. *a*, *b* [$\frac{1}{2}$]; *c* [$\frac{1}{3}$].

[1] This word is pronounced "selt," and has no connection with the Keltic, or Celtic, race.

its variations in shape are innumerable,[1] but throughout them all its cutting edge, more or less curved, is at the wider end, whence it tapers slightly or steeply throughout its length to the narrower end or butt. And, whatever its exact form, it was almost invariably hafted by inserting the small end into a slot cut in a wooden handle, and pushing it through until its tapering sides held it a little short of the middle. Thus blows struck with the front edge only served to wedge the head more firmly into the haft, while binding-cords probably saved the wood from splitting as well as the head from being jarred out of its socket. Celts

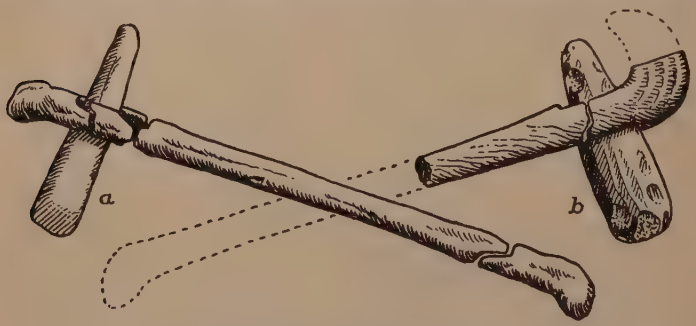

Fig. 20.—Neolithic axes in their original hafts: (*a*) Solway Moss; (*b*) Ehenside Tarn, Cumberland [$\frac{1}{3}$].

hafted in this manner have actually been found in this country deeply embedded in peat beds which have preserved the wooden handles these thousands of years (Fig. 20). That these implements were intended for different uses is obvious from the manner in which they have been worked, which varies between the roughest of chipping and the perfect flawless polish (Fig. 19, *a–c*). Thus it would seem practically certain that the more highly finished specimens were weapons pure and simple, because the laborious care spent on their production shows that they were never meant for

[1] See also p. 82, Fig. 22 (*f*), and p. 119, Fig. 25 (*a*).

the rough everyday use of a tool. In size and weight, too, celts vary as considerably as in form and finish, ranging from tiny ones, of uncertain use, scarcely an inch in length and an ounce in weight, to terrible weapons as much as sixteen inches long, and weighing many pounds.

Among the other weapons the most important are the chipped flint arrow-heads which have been found in large numbers wherever Neolithic man penetrated. The oldest form, which is leaf-shaped, is of distinctly Paleolithic derivation; this, in turn, was followed by a long diamond shape, from which was later evolved the characteristic tanged and barbed arrow-head of Neolithic times. There were one or two other forms, but it is the last mentioned which fixed the type of arrow-head for all subsequent generations. Many of these arrow-heads, varying from half an inch to two inches long, are most beautifully and symmetrically chipped, and, though some in form and technique are faulty and crude, the general standard of the workmanship is high. But while the celt and the bow and arrow are pre-eminently the weapons of this period, there are other types, among which may be mentioned flint daggers, lance-heads and spear-heads, maces and axe-hammers; only the last, however, call for notice here, and they only because of an unusual feature present in them.

Some time about the middle of this period, a new mechanical device for the hafting of implements was discovered. Hitherto the stone head had been fixed in one way or another *in* the haft, an unsatisfactory arrangement at best, as the wood was continually splitting, or the stone working loose. Now, with the process of grinding, and the use of stones of a more adaptable nature than flint, some genius hit on the idea of working a hole *through* the stone implement for the reception of the shaft. It is not known

how or where this new method originated, but all the resources of modern science have been unable to better this principle of the union of head and shaft in tools of percussion, first invented by a skin-clad Neolithic man. It may have been due to the chance find of a pebble with a natural perforation, through which he slipped a stick for use as a hammer: or, again, it may have been the result of sheer brain work, provoked by the perpetual problem of his splitting hafts. He was certainly capable of such a mental process, for witness how he set about the solution of the problem of obtaining an artificial perforation. First he modified the traditional form of the celt, retaining its axe-edge, but thickening it at the butt-end sufficiently to allow it to be pierced with a hole yet not weakened thereby; and so he arrived at the shape called an axe-hammer. Then, with the end of a stick and wet, gritty sand, he patiently and laboriously drilled, or, rather, wore a hole in the axe-hammer by revolving the stick between the palms of his hands. He worked first on one side and then on the other until the two cup-shaped holes met in the middle. Thus the stone at last was pierced, and, incidentally, the enormous and complicated power drills of modern engineering were made ultimately possible. The earliest perforations of his implements always show a narrowing midway through, where the two holes met; but towards the close of this period the perforations become perfectly cylindrical. This was probably accomplished by using a hollow stick and sand, and drilling right through from one side only, thus removing a small cylindrical core of stone. The late perforations show the most excellent workmanship.

Tools in abundance are found among the stone implements of this time; some have already been described, while amongst the others are numerous examples of grindstones and polishing stones, hammers and chisels, scrapers and borers, flint saws and planes,

and beautifully flaked flint knives, some of which are made with the handle along the back of the blade, and others to be inserted at one end into a handle in the modern manner. As a general rule, the rougher the work to be performed by the tool, the coarser and less finished is its final shape. Hence we find roughly chipped implements and the most carefully polished ones are in contemporary use right down to the very end of the Neolithic Age.

The enormous demand for implements—the direct result of all the various activities and pursuits of this period — led to the systematic mining for flint. For in spite of the use of other kinds of stone, flint still retained its ancient importance for man as being best suited for the manufacture of edged and pointed tools. Some of these flint mines have actually been discovered at Cissbury, in Sussex, and Grime's Graves, in Norfolk, and they show that all the fundamental principles of modern mining were evolved by Neolithic man —if, indeed, they had not come into being in late Paleolithic times, as some aver. Shafts were sunk sometimes as much as forty feet deep, and, in the galleries driven horizontally from the bottom of them, walls of undisturbed chalk were left to support the roof (Fig. 21). When one gallery was worked out it was filled with

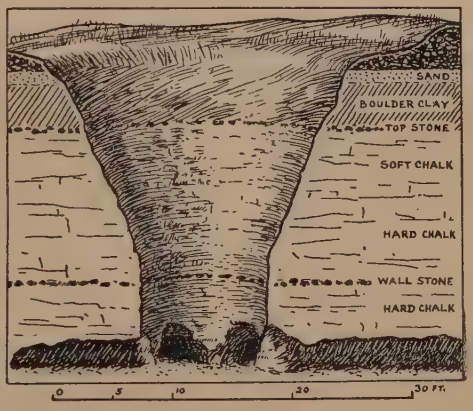

Fig. 21.—Section of a Neolithic flint mine at Grime's Graves.

the waste produced in the working of a fresh one, thus obviating the labour of drawing all the stuff to the top. The miners used picks of deer-horn, and shovels of the broad, flat shoulder-blade of the ox ;[1] and though their axes were normally of chipped flint, a polished axe of basalt (Fig. 22, *f*) was found in one of the galleries, and marks of its broken edge were noticed on the walls. Innumerable other tools were found, among which we may notice chopping tools of flint (Fig. 22, *a*), deer-horn wedges (*d*) and punches (*e*) for dislodging the nodules of flint; and smooth bone tools of unknown use (*c*). They had also lamps (*b*) hollowed out of lumps of chalk, to light the underground passages. Mining

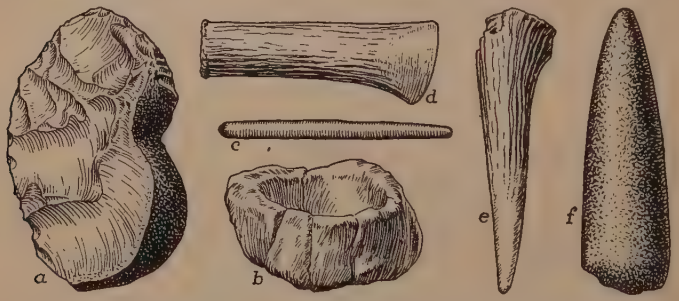

Fig. 22.—Neolithic mining implements : (*a*, *b*, *d*, *e*) Cissbury ; (*c*, *f*) Grime's Graves. *a–d* [$\frac{1}{4}$] ; *e*, *f* [$\frac{1}{6}$].

villages sprang up in suitable spots near the work ; and what might be called flint factories for the manufacture of implements were likewise established on the surface near the mouths of the pits. And, finally, when one pit was completely worked out, the shaft was filled up with the rubbish obtained when sinking a new one close by.

Valuable as these discoveries are for the light they throw on the mental capabilities of Neolithic man, they are of extreme importance from the economic standpoint. This localisation of manufacture, and the

[1] See p. 63, Fig. 16 (*a*, *b*).

extensive scale on which the implements were produced, prove beyond a shadow of doubt the existence of a very considerable amount of internal trade. And, taken in conjunction with these evidences, further proof of trade is seen in the fact that large numbers of finished stone implements have been found at great distances from any possible manufacturing centre, and in districts which have no natural deposits of such stone. It is true that this last phenomenon is common also to the Paleolithic Age, at which time it might in part be accounted for by the then roving life of man; but now, with man permanently settled on the land, even such a partial explanation no longer holds good. Trade must also have been encouraged by the breeding of flocks and herds, and the practice of agriculture. Farmers would want to improve their breeds from time to time by the introduction of fresh blood, and this would lead to the exchange or purchase of animals from their neighbours' stocks. And corn, which, as we have seen, must have been early exchanged from settlement to settlement as seed, becomes now, consequent on the increasing demand for foodstuffs, an article of commerce only less important than meat. Further, because these activities are wholly dependent on the exploitation of the soil, the land itself begins to take on a value hitherto unknown; and the more fertile and better situated fields may themselves have become sooner or later the subject of bargain and treaty.

The most important evidence of trade, however, is to be seen in the growing specialisation of industry. From the preceding chapters it becomes apparent that man's tendency to specialise increases with a developing civilisation. The more numerous and diverse his needs become, the less capable he becomes of supplying all of them. And no longer self-dependent, he relies more and more on the productions of his fellow-men for those things which he has not the ability, the time,

or the means to produce for himself. Hence some medium had to be evolved by which a man's surplus production of one thing could be transformed into the other things he wants, and so man arrived at barter, which, being the direct exchange of goods, this for that, is the earliest form of trade. And if, possibly, we have sometimes to substitute communities for individuals in this age, the same rule holds good: for few, if any, of the villages could have been so favourably situated that all their requirements could be satisfied within their own immediate environments. So that in this case, too, local products would have been exchanged, one thing for another.

But all things are not produced with equal ease or facility, neither are they for man's purposes of equal value. A celt of chipped and polished flint would take much longer to manufacture than a chipped flint arrow-head; and, again, an ox represents a greater amount of potential food than a pig or a sheep; consequently these things never could have been of equal value. The worth of the product of a man's labour, from the first, must have held some relation to the time and work necessary for its completion; and that fact would seem to have been the first basis of the calculation of values in barter. Insufferably irksome as such a system of trade would be nowadays, even at that time, while solving many problems, it must have had its inconveniences, and more so for an individual than for a community. Let us suppose that a polished stone axe and half a dozen flint arrow-heads represent a fortnight's labour, and that the craftsman exchanges the axe with a farmer for its value in corn, thus obtaining much more than is required for the immediate needs of himself and his family. But he wants other things besides corn—meat, for instance, a new grindstone for his work, and a deerskin or two for clothes. He knows that a man in the village has just killed a pig, and he manages to

exchange a portion of his corn for a leg of pork. Then the hunter to whom he speaks about the skins doesn't want any corn, but for the half-dozen arrow-heads promises him the skin of the next deer he kills. There still remains the grindstone to be purchased, but the particular kind of stone used for that purpose is not found in his district. It is to be had perhaps twenty miles away, so he sets off and barters the last bag of corn he can spare for a new grindstone, and returns well pleased. Then, while living on what food he has remaining, he makes other implements, and the same process is gone through again.

The waste of time and the worry involved in such transactions must have been enormous, especially when dealing with perishable food-stuffs. Nevertheless, barter persisted for a long time, for thousands of years, in fact; and man, seeing no alternatives to it, naturally accepted its inconveniences and difficulties as being inseparable from trade—inseparable, yet, after all, insignificant when compared with its corresponding advantages.

A last word may be said as regards the existence of foreign trade. The principal trade routes across the continent in Neolithic times lay chiefly along the great rivers; and the route which most affected England ran from the Mediterranean by the Rhone and the Rhine to the North Sea. Polished Neolithic celts made of a beautiful green stone of the nature of jade have been discovered in several places in the kingdom; and as the Alps is the only place where such stone occurs in Europe, and as kindred implements of the same stone have also been found in France, Belgium, and Italy, they could only have spread thither and have been brought hither in the course of trade. But, in addition to this route, there was also a certain amount of intercourse between the Mediterranean basin and north-west Europe due to the gradual development of coastal

navigation in the course of trade during this period. And it was along these trade routes, overland and coastal alike, that the civilising influences of the new industrial discoveries spread throughout Europe, and modified sooner or later man's ancient habits, beliefs, and customs—even in such remote and outlying parts as Britain.

CHAPTER VII

Social Beginnings

In order to arrive at a true idea of the social life of these times, we must think of the Neolithic villages as being very sparsely scattered over the face of the country in the upland districts chiefly, and separated from each other by vast tracts of forest-land. With settlements become permanent, the intercourse between them would naturally tend to follow along the lines of least resistance; thus we find that when man travelled from village to village he went along the crests of the hills, and only when compelled by the nature of the land did he descend into the densely-wooded valleys.

It is extraordinarily interesting to watch the commencement and perpetuation of a field path, or even a "short cut" across a piece of unfenced land in the suburbs of a town; to notice how the first-comers choose the line of least resistance, how the first faint track swerves hither and thither to avoid obstacles or even stagnant puddles, how the path becomes established along that first wavering line, and how, later on, when the obstructions are removed and the puddles dried up, the wayfarers still follow the old track round this bend and that, avoiding impediments no longer existent; so that, to one first seeing the path at this stage, it would appear to have been begun by a drunken man, and followed ever since by others not sober enough to know whither they wanted to go. Such, in miniature, is a picture of the first paths trodden

by man; and if we think of broad marshes instead of rain puddles, and of obstacles such as forests and rivers, we can understand why man kept to the higher ground where his footing was sure and firm and he could see where he was going. With successive generations these paths became more and more ineradicably fixed, until, near the end of this period when pack-horses began to follow them, they came to be established at last as trade routes.

These tracks, first worn by the feet of Neolithic man going and coming between his upland settlements, can still be seen in many parts of the country, and especially south of the Midlands. Most of them have no name, except perhaps locally, but they are generally called "ridgeways," and as such are marked on the maps of the Ordnance Survey. One, at least, which follows the line of the North Downs, is known to most of us as the "Pilgrim's Way"; and this is but a portion of the ridgeway which originally connected the south-east corner of Kent, near Dover, with Salisbury Plain, and to-day can be traced practically throughout its entire length.

But the ridgeways were not the only trade routes, or means of intercourse, which during this period linked up the widely scattered communities; with the use of canoes the waterways, too, rendered a like service between the lake-dwellings and other settlements on the banks of the rivers. Hence, it was along these two routes, ridgeways and waterways, that the culture which all Neolithic men shared in common, spread from place to place, and sooner or later permeated the whole land.

We have already considered the evidences of this widespread culture, as seen in their hut construction and domestic economy, their agriculture and pasturage, their implements of stone, and their growing practice of trade. But there is another aspect of civilisation

to be discussed, and further facts in connection with these things must be taken in conjunction with other and later developments of the Neolithic Age, if we are to obtain a just appreciation of the social life of these people.

In addition to man's individual or family occupations, with which we have been mainly concerned hitherto, there were other employments in which the inhabitants of one village were engaged in one common endeavour; and it is work of this class which reveals the most significant social achievement of Neolithic civilisation. Examples of such work have already been noticed in passing: the erection of the common platform of the lake-dwellings, and also their encircling palisade defence. But the settlements in the uplands had likewise their surrounding fortifications: the pit-dwellings being defended by earthworks of ditch and rampart, the latter probably topped by a wooden palisade; while in the stone districts of the beehive huts, strong, dry-stone walls were built for the same purpose, these walls being sometimes as much as twenty-five or thirty feet in thickness. Works of this magnitude and importance indicate a corporate effort in their execution; so that in them the tangible effect of a conscious social organisation is apparent for the first time in the history of our country.

We have seen how, in the former ages, man's instinct always led him to live and hunt in small groups or packs—this "pack instinct" being probably derived from his pre-human ancestors; and, further, how, with a growing civilisation, there was a tendency for the pack to increase in size. Thus, in late Paleolithic times, we found the crowded cave-dwellings, and the open hunting-stations which often covered a considerable area and were frequented by many families at the same time. With such an increase in the size of the social unit it is apparent that man must have exercised

more and more consciously some at least of the social virtues, such as those of mutual forbearance and self-discipline. And though there is no evidence that within the "pack" the significance of the individual was very clearly realised by man as yet, still some movement in that direction may perhaps be indicated even at this early stage by the appearance of his art; because it is the nature of art to foster and encourage an outlook on life and an attitude to it essentially individual. Then came the troubled period of the transition when these larger communities were broken up, when all the artificial conditions of existence favouring man's development were no longer possible, and when little groups of hunters and fishers were scattered about the country. And for a long time there is no evidence of any social development at all—rather, indeed, the reverse—in the grim struggle for mere existence which ensued. But when natural conditions became more favourable, we know that men gathered together again in small settled communities; and, a little later, in these works of the early Neolithic Age we can perceive the first permanent results of a conscious corporate responsibility and effort.

Unfortunately we know almost nothing of the social organisation of these early times, and, because of the very nature of the evidence required, we can hope to learn but little more. But seeing that the law of evolution governs man and his institutions alike, it is practically certain that the isolated and fortified Neolithic village indicates that society had now arrived at the clan—that is, at the stage of development midway between the ancient hunting family and the tribe of the subsequent periods. Thus the village was the dwelling-place of a group of kinsfolk, all members of which, recognising their common descent, were held together by the ties of blood and of mutual interest. At this stage the clans were independent and

autonomous, and each of them acknowledged only the rule of its own chief, or headman, who probably was chosen for his skill in war or wisdom in council. Evidence of such chieftainship is supplied by the long barrows, or grave mounds, of this period, later to be considered. For, while they are too few in number to have been the general method of interment, their size in each case—representing as it does the labour of many men for many weeks—suggests that the whole clan was unanimously concerned to honour thus the burial-place of a man distinguished or revered above the common.

The antiquities of the Neolithic Age reveal nothing more of the organisation of society beyond this vague and unsatisfactory outline. But while any attempt to fill in details should be received with caution, it is not unreasonable to suppose that some light on these things may be gained from the customs and practices of those primitive races in many parts of the world, who are still—or were until recently—actually living in the Neolithic stage of civilisation.

Hence it would seem very probable that, within the villages of ancient Britain, a man was still more important, and enjoyed more rights, as a member of the clan than as an individual; and that outside the community no rights were recognised. It also seems likely that property was of three different kinds. The most valuable of all—the results of the labour of the whole community—belonged to the clan: thus, for instance, in the case of the forest-cleared land fenced in and maintained for pasture and agriculture, the right of grazing would be common, while the arable would be apportioned to the different families, and be subject perhaps to redistribution at certain periods, as it was under the Mosaic law. Next in value would be the possessions of the family: those things which were produced by, and therefore owned or shared by, all

its members, such as the hut they built and inhabited, the cattle they bred and tended, and the crops they raised on their allotment of land. Last, and least in value, would be the personal belongings: the articles created, or traded, by the individual—his weapons, tools, ornaments and clothes.

But no community, however small, can be organised to conserve life and property without law. And as law was primarily evolved both from the customs and usages of everyday life, and from religious beliefs and ceremonies, it is obvious that Neolithic man must have inherited from the older family groups a tradition of restrictions, inhibitions, and observances, which more or less adequately served the early needs of the clan. And it is also evident that the later economic and social developments, by creating new precedents, were continually superseding, modifying, or adding to the law of the clan, both customary and ceremonial. It would be idle to speculate on the forms of the law and its administration, but the punishments were probably awarded by the general voice in the earlier days, and in the later, by the chief or the priest. All we know is that civilisation and law must have developed hand-in-hand, and that—man being human—"thou shalt not" was probably more necessary than "thou shalt."

Yet, while the evidences prove man to have attained to a considerable degree of corporate organisation in the Neolithic Age, we must not forget that his social horizon was rigidly bounded by the encircling fortifications of his little community. Nor must we forget either the significance of those fortifications themselves, or the reason why weapons form so great a proportion of the implements of this period. Walls a score feet thick were not needed to keep out wild boars and wolves, nor were celts with blades a foot long altogether necessary for slaying a roe-deer. No, there was another side to the pastoral and agricultural life of

Neolithic man; another aspect of him, and a forbidding one—furtive raids and bloody revenges—stolen cattle paid for with human lives—feuds and flaming homes—and slavery with still darker horrors in its train.

Although these things can be, and too often have been, unduly stressed, they are, nevertheless, a characteristic feature of this stage of social development. Yet, even so, that does not imply that the Neolithic civilisation was more barbarous than that of the Paleolithic Age, but only that it was less circumscribed. It was because the hunting life of Paleolithic man did not admit of much organisation that the combatant units were then smaller. It was likewise because the lack of personal or family belongings, other than implements, offered no incentive to plunder, that the causes of earlier strife were probably limited to such provocations as wife-capture, and trespass in the hunting grounds. And if slavery was non-existent in the older age, it was only because there was no demand for labour, which is, of course, the be-all and end-all of forced servitude.

With the Neolithic civilisation, however, the case on all counts is different. Society was now organised in clans; and for the first time in the world property abounded. There were flocks and herds and harvested produce—the material representation of months of labour—and man, seeing them, realised that such things could also be obtained, and more swiftly, by raid and pillage, and acted accordingly. Thus evil, as well as good, proceeded from the exclusive possession of property, whether owned by the individual, the family, or the clan. But this was not the only evil consequence of the creation of property—the question of labour soon became inextricably involved with it. Although property became increasingly desirable, yet it could not be easily amassed while it was equally shared among all who worked to produce it. So, prompted by that same spirit of cupidity which sought

to get property by plunder instead of by production, man took prisoners in the raids and, compelling them to work, obtained cheap labour—cheap, because the captives, not originally belonging to the community of their captors, could therefore claim in it none of the rights pertaining to kinship. Thus slavery came into the world as a solution of the labour problem.

But if in reaction from this aspect of Neolithic man we are inclined hastily to condemn him as a savage, we might ask ourselves if either private or state-organised bloodshed is yet entirely absent from modern civilisation; and though Neolithic society did not extend beyond the pale of the community, if modern nations—the parallel unit—have even yet welcomed each other in an international brotherhood; and though slavery may have been rife in the Neolithic Age, if we have wholly abolished sweated labour from our midst at the present day. In their case, and in ours, these several shortcomings are merely the result of a defective social vision and self-centred habits of thought.

The problem confronting us in our survey of man's social development is to get all its different aspects into a true perspective; and the only way to do so is to regard, not exclusively, but chiefly, the elements of progress rather than the elements of lingering barbarism. Because the mind of man, like nature, abhors a vacuum, and cannot be simply emptied of its old and false ideas, and by subtraction be made perfect; it follows that only by its enrichment, by a new appreciation of other and truer values which will presently crowd out the old, it becomes possible for any improvement to be made. Hence, for instance, the Neolithic craftsman's pleasure in the first perforation of an axe-hammer is of infinitely more importance to civilisation than his after use of it to slay a man, for the craftsman's joy denotes the birth of new values in the scheme of things.

The special significance of the Neolithic Age in the

history of man is that it was pre-eminently the age of enrichment and of new values. And not least among the influences which brought this about was the development of religion. Evidences of its importance in the life of this period are especially to be seen in the burial customs, and in the numerous megaliths, or vast monuments of stone, which remain to this day in many places. But these are evidences only of the existence and importance of religion; and so little else has survived that we know for certain nothing of the ideas from which they sprang. It is, of course, more than probable that these religious ideas were crude; but however debased they might now appear to us, they were better than nothing, just as life is always better than non-life; for ideas, like life, have potentialities of development, whereas wanting either, there can be no change at all.

Putting aside for the time being man's religious conceptions of life, let us first ascertain his attitude towards death so far as it is revealed by the actual witness of the Neolithic tombs. At the very outset we are confronted yet once again by that same law of continuity and development which we have so often recognised at work in man's affairs; for his spiritual ideas of death and after-life, as well as the sepulchres themselves seem to have been more or less directly evolved from those of Paleolithic man. We have already noticed, as occurring in Paleolithic times, the custom of burial—often in caves—the provision of implements and food for the dead, and the funeral feasts of the living; and these are likewise found in the Neolithic Age. But there was another development in the older period: for stones began to be ranged round the body in the grave to protect it from disturbance—an idea further elaborated towards the end of the transition, when graves were lined with flag-stones set on end, upon which others were laid horizontally as a

cover or lid. Such erections are known as cists, and although they were almost entirely superseded by other structures in the Neolithic Age they reappear later. Nevertheless the idea of protecting the body remained; and in the typical Neolithic tombs—dolmens and long barrows—was carried to extreme lengths.

The dolmen, which seems to have been a development of the cist—though not evolved in this country—was generally composed of three or four huge upright stones forming the walls of a sepulchral chamber, surmounted by a cap-stone as roof; and being invariably erected on the land level, the whole structure was covered over by a mound of earth. In the course of time the covering soil has in many cases been partially or completely denuded; and now these stones stand bleak and bare witnessing still after thousands of years to Neolithic man's belief in something more than life and death. It is not known where this custom originated. Some think it came hither from the east; others, from the north. But however that may be, dolmens are common to nearly all the European countries which border the North Sea, the Atlantic, and the Mediterranean, though chiefly confined to the coastal regions. A well-known and typical dolmen, called "Kit's Coty House," is to be seen near Maidstone, in Kent; but they are to be found much more frequently

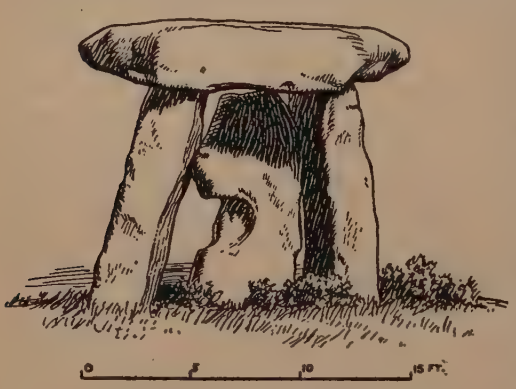

Fig. 23.—Kit's Coty House.

in the south and west of England than in the east and south-east. They also occur in Wales, and in Scotland and Ireland. In Wales, however, the dolmens are frequently called cromlechs, but, to avoid confusion, the latter term is now usually restricted to the stone circles, or rings of standing stones.

A still further development of the burial customs occurred towards the end of this period, and can be seen in what are called the chambered long barrows. Excavations have shown that the simplest, and probably the earliest, form of these structures had, as a nucleus, a sepulchral chamber like the dolmen, about ten feet square. This was approached by means of a passage or gallery, ten or fifteen feet long and about four feet wide; both chamber and gallery being constructed of large upright stones set beside each other for walls, and roofed with great horizontal stone slabs, sometimes more than a ton in weight. In a few cases, however, the roofs were arched after the manner of the beehive huts. Earth was then heaped over the whole erection in a huge mound which, in plan and elevation, resembles half a pear lying on its flat side. The long axis of the mound was customarily directed east and west, the chamber being contained in the broader and higher eastern end, where lay the entrance to the gallery. Encircling the mound was a peristalith, or a line of upright stones at regular intervals, the spaces between them being filled with dry-walling which, approaching the eastern end, rose in height and swept round and inwards to the entrance in beautiful convex curves. The entrance to the tomb was marked by two great stones as doorposts with sometimes a third as lintel; but the opening itself was so low as to be entered only in a crouching position, and, in some cases, actually on all fours. Finally, after the dead had been placed in the chamber and provided with food and implements, the door was closed with a large

stone—which was rolled aside for subsequent interments and again replaced—and the whole entrance lying between the incurving walls was covered up and hidden from sight with rubble and soil.

While the foregoing is a typical example of the chambered long barrows, it should be remembered that no two of them are really alike. They vary in many ways—in size, from about one hundred to over three hundred feet long, and from thirty to seventy-five feet wide; in shape, and in details of construction. And while some have chambers like the transepts of a church, opening out opposite to one another on each side of the central gallery—as many as six pairs occurring in one example—others, again, have no gallery at all, but have chambers round the sides of the barrow, opening externally, like small caves in the side of a hill.

But it must not be supposed that all the long barrows of the Neolithic Age were chambered; many of them contained only cists, and the most numerous of all, found in districts where stone is scarce, are simply huge mounds of earth of the characteristic long oval shape, orientated and more or less completely surrounded by a trench. But whether they are chambered or not, one of the most remarkable things about the long barrows is their scarcity, especially when compared with the ubiquitous round barrows of the following period: for of the former there are probably not two hundred in the whole country, whereas nearly two thousand of the latter have been counted in Wiltshire alone. This scarcity of the long barrows has already been alluded to, and the inference then drawn from it—that they were not the burial-places of the ordinary people, but of persons above the common rank—is further supported by the fact that the long barrows are never found in groups like the round barrows but only singly, and often at great distances

from each other. It is probable, of course, that subsequent centuries of agriculture have obliterated many long barrows in other districts inhabited by Neolithic man, for now they are with few exceptions to be seen only on the higher points of the downs and the northern moors. They are most numerous in Wiltshire, but even there they do not exceed sixty in number, much less numerous in the adjoining counties of Gloucester, Somerset and Dorset, and comparatively scarce in Yorkshire and in Scotland; yet these, with single examples from some half a dozen other counties, are all that remain standing in Britain at the present day.

While inhumation, or burial of the dead body, was the general practice throughout the Neolithic Age, a new custom begins to be found towards its close. The long barrows of Yorkshire, few as they are, are really important because they reveal the most numerous though not the only evidences of cremation in Neolithic Britain. Cremation was at this time becoming increasingly common in France and northern Germany, thus, even though the British practice was distinctive in some respects, it was probably introduced here by the round-headed immigrants previously mentioned. New influences are also apparent at the end of this period in the conformation of the barrows themselves. And we find a transitional form between the old chambered long barrow and the coming round barrow, in the chambered round barrows and chambered cairns (the latter so called because the covering mound is composed of stones instead of earth) which began to appear in various districts—chiefly in Cornwall, Derbyshire, and Wales, and also in Scotland. One of the Cornish chambered cairns deserves particular mention because it was surmounted by a double-walled dome constructed on the principle of the beehive huts. Though its date is uncertain, it was probably built at the end of the

Neolithic Age, or early in the transitional period which followed. The external diameter of the dome itself is about thirty feet, and the lower parts of its walls—twelve feet high in places—are still standing. From them it is estimated that the completed dome was originally as much as twenty feet in height; thus, as the cairn was erected on the cliff which towers above Cape Cornwall, the whole structure must have been imposing in the extreme, and a landmark for miles around.

But the barrows are not the only evidences that Neolithic man was concerned for more than mundane matters. In the hilly districts of the western half of England, in Wales, and in Scotland as far north as the Orkneys, are to be found circles of huge standing or fallen stones—circles now known as cromlechs. Indeed, Britain may almost be said to be the home of the cromlech, for no other European country possesses so many monuments of the kind. They may be either simple or concentric circles, or, more rarely, two smaller separate circles contained within a larger. Their stones may stand singly or in pairs, close together or wide apart, and may measure anything from three to twenty feet in height above the ground-level. Some circles may be surrounded by a ditch, others by a ditch and a bank; and while a few have a monolith standing in the centre, a few others have one standing at some distance outside the ring. And, lastly, they may range in size from the Avebury cromlech, the largest in Britain, which measures nearly three-quarters of a mile in diameter, to that of Arbor Low, which is only about one hundred and forty feet, and others even less. In fact, the variations are limited only by the number of the circles themselves.

It is practically certain that some of these cromlechs were erected in the Neolithic Age; but all are alike in being the expression of religious ideas which originated

during this period. And although these ideas may remain in doubt, when we stand within the circle of one of the better preserved of these ancient monuments, so simple in plan yet so impressive in effect—monuments which culminated in the following period in the awful grandeur of Stonehenge—it is then we are convinced that the men who built them were surely, if slowly, rising above the grosser practices of superstition, animism and magic. For while it is more than probable that the medicine-man, the taboo, and devil worship had power still to move man at that time, such monuments as these could only have been due to other spiritual impulses—to the dawn of some nobler conception of the mysteries of life and death.

Opinion, however, is divided as to the precise purpose for which the cromlechs were erected. Many authorities maintain that they were solar temples. And, indeed, there is a certain amount of evidence which suggests that the sun was worshipped at this time. Neolithic men, it must be remembered, were the first agriculturists, and thus the first men to be consciously dependent on the sun for a portion of their sustenance. Following on such consciousness, it would soon be apparent to them that all other herbage besides their own crops owed its growth directly to the sun; and then, that all herbivorous animals at one remove, and at two all carnivorous animals, and man also, were in a like case. Thus, from the recognition that all living things derived their life force from the sun, to the worship of it as the Life-giver, is at least a possible step in primitive mentality. In this connection it may be noted that certain figures of concentric rings surrounding a dot, or circular hollow, have occasionally been found carved on the inner walls of Neolithic tombs. These figures are usually supposed to be sun-symbols; and, by reason of their situation, to possess a religious significance. Further, the long barrows, as we have

seen, were generally orientated as though to enable the dead to look towards the rising sun. And, to anticipate, this probability of sun-worship becomes a certainty in the following period.

Other authorities, while admitting that the sun may have been, and probably was, worshipped in the Neolithic Age, roundly deny that the cromlechs were erected for that purpose. They see in them a development of the upright stones which sometimes surround the foot of the long barrows; and for that reason, and because cairns and barrows are frequently enclosed within, or associated with, the cromlechs, they claim them to have been primarily either commemorative monuments or cenotaphs. It is not improbable that both views contain some portion of the truth, for the two ideas of temple and memorial are by no means mutually exclusive. And to-day we have tombs in our churches, and churches in our graveyards and cemeteries.

The only other megalithic monuments which we need notice are the isolated standing stones, called menhirs, which are found in so many parts of the country, and which are probably likewise of this or the following period. They may have marked the place of a simple interment, or some boundary; or, again, they may simply be remnants of larger monuments, such as stone circles or dolmens; but so little evidence has been found in relation to them that it is impossible as yet to ascribe a definite reason for their erection.

In many of these megalithic structures, in the chambered barrows and cairns, and in the beehive huts previously described, we can discern the first practice of architecture by man in Britain. And notwithstanding their simplicity of design and construction, and the fact that they are composed merely of rough unhewn stones, these ancient monuments reveal a genuine feeling for art. That, however, is not

surprising when we remember the marvellous æsthetic achievement of the former age. But what, at first sight, is remarkable is the apparent scarcity of other forms of artistic expression among the remains of this period, and also the utter failure of man's earlier inspiration.

Obvious as it is that the cessation of Paleolithic art in north-west Europe was due to the physical changes which so profoundly affected man's whole existence at the close of the Magdalenian period, it is not so obvious why that particular form of art did not later reappear. Doubtless it was owing to several contributory causes, but chiefly, perhaps, to the change in religious ideas which would inevitably follow the change in man's life from hunter to farmer. This appears yet more probable when we reflect that while no primitive peoples, practising agriculture and pasturage, have ever produced anything even remotely akin to Paleolithic art, this same art, lacking only the supreme attainment of the older day, is not without parallels among later hunting races. It has been found among the Bushmen of South Africa, and the Eskimo of North America, both, at the time of their discovery, living in the Stone Age, both depending wholly on the chase for their means of existence, and both also depicting hunting scenes and making realistic drawings, paintings, or carvings of animals on cave-wall or implement. And, like effects proceeding from like causes, the customs and beliefs of these races in all probability indicate that the art of the Paleolithic hunters likewise had, to a greater or lesser extent, a religious or supernatural significance, being produced or used for the purposes of sympathetic magic—or, in other words, to enable man to exercise some mysterious power over the animals depicted, and so ensure good fortune in the hunt. But however that may be, from these artistic and cultural parallels, it would seem that this particular

form of art was the distinctive æsthetic expression of a certain stage in the development of man the hunter, and, being such, did not and could not reappear in the Neolithic Age, when all the conditions of man's existence were altered, and his activities and outlook so radically different.

In spite of first appearances, there is, in fact, no reason to suppose that Neolithic man was less susceptible to æsthetic impulse than his Paleolithic forefathers. The impulse was different, that is all. Art speaks to man with many voices; and different races—different generations, even—may hear each a different call. Thus we can discern in the Neolithic Age, especially in the polished stone implements, a consuming desire for symmetry of form, and a remarkable love of finish; and if neither ideal is new to man at this time, neither has hitherto been so successfully attained. Man also now is beginning to show a real feeling for the decoration of surfaces, and evolves the naïve all-over patterns (Fig. 24, *d*, *e*) and the banded ornament (*a*–*c*) of the pottery.[1] And, if again we may draw an analogy from the culture of the many backward races living to-day, or until but yesterday, in the Neolithic stage of development, most of the other implements

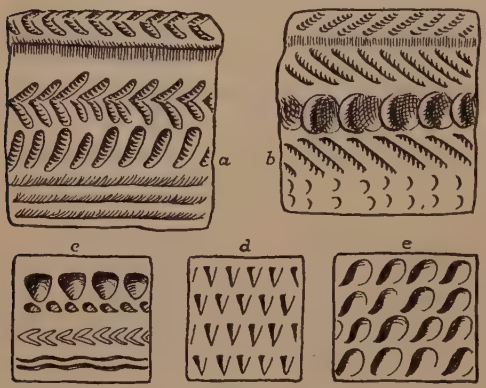

Fig. 24.—Decorative motifs from Neolithic pottery: (*a*, *b*) West Kennet, Wilts; (*c*–*e*) Peterborough.

[1] See also p. 70, Fig. 17, and p. 71, Fig. 18.

and utensils of daily use at that time—objects of wood and basket-work and leather, long since mouldered away—were likewise enriched with pattern and ornament to satisfy man's need for beauty.

This æsthetic craving for decorative effects, this desire for something more than mere form, would seem also to have permeated man's widening conceptions of religion, for everything points to ceremonial as being the most striking feature of the religious life of those times. Neither the stupendous circles of standing stones, nor the great chambered barrows, could have been the background of an empty stage. That spiritual force which expressed itself in these structures must have been a religion of elaborate and spectacular rituals, in which processions and, almost certainly, dancing had place, as well as chanted or intoned invocations to the Life-giver, all being accompanied by the twanging of stringed instruments or the shrill notes of flutes or whistles, and by the low reverberation of drums. Thus, as in the earlier age, it would appear that religion and art—those twin expressions of man's spiritual need—were still to a great extent mutually dependent, each owing to the other no little of its inspiration and its possibilities of development.

The foregoing is not a fanciful picture, in spite of the lack of direct evidence for it. Music is one of the oldest of the arts: indeed, there is every reason to believe that human song preceded articulated speech. Even now, in moments of emotional or spiritual exaltation, man instinctively forsakes his customary speech for some rhythmical or modulated utterance. And if once again we turn to modern Neolithic races, no matter how backward they may be, we everywhere find the song and the dance, accompanied almost without exception by some form of musical instrument, wind, string, or percussion. We must also remember that long before the close of this period in Britain,

musical instruments were in use in the East; and that, as we have previously seen, there was already some intercourse between north-west Europe and the Mediterranean. Further, a longish hollow bone perforated with round holes, and generally supposed to be a whistle, has been found amongst other remains of the Magdalenian period in a cave in Devon; but it is probable that the drum had long been in use at that time, and also that some archaic form of stringed instrument was already in process of being evolved.

Let us look back one moment to late Paleolithic times, and notice yonder group of hunters seated round their fire by night at the cave mouth. They are telling tales one against another of their past exploits, for man was ever an egotistical being. And one, younger than the rest, speaks in his turn telling the tale of his tremendous single-handed encounter with a bison; and he grows bright-eyed with excitement as he lives it over again in memory. His voice rises and breaks into sing-song cadences as he tells how he cut out the leading bull from the herd; and chanting thus, he thinks suddenly to pluck the string of his bow as he tells of the shooting of the first arrow. Pleased with the twin sounds of voice and humming string, he shoots other arrows—probably unnecessary to the tale—ere he twangs exultingly the fatal shot that brings the bison down. And his fellows, pleased with the realism of the bow-string's twang, follow his example as they tell their tales by other fires. And so the fashion spreads, and everywhere tales begin to be chanted to the sound of the humming string; and thus, as the first significance and realism of the custom are slowly lost, the bow becomes the first stringed instrument of music. Later would come the perception that the strings of different bows sounded different notes, because they were of different lengths and tensions, and this would lead to experiments, and result at last in the invention of an

instrument with several strings. In some such manner as this the development of the harp-like instrument was very early made possible to man.

From like accidental beginnings the other types of musical instruments were doubtless evolved; but because none of them could be fashioned of stone they must have been made of some such perishable materials as bone, wood, skin, and twisted cords of hair or gut. And thus, in common with a myriad other ephemeral evidences of the Neolithic Age in Britain, they have vanished and left no trace behind.

In spite of the growing power of religion and its close association with these various forms of æsthetic expression, we must not forget that, as was implied earlier, its possibilities of good were to a considerable extent rendered ineffectual by the persistence of superstition. The world of nature—rocks, streams, trees, mountains and valleys—was for man still populous with invisible beings such as spirits, demons and elves, and these, be it noted, for the most part inimical to his interests. And because he feared them and their actions, the more powerful had continually to be placated by offering or sacrifice, and the less powerful circumvented by amulet or charm. Such animistic beliefs are, of course, world-wide; and, as we shall see, they persisted throughout the early ages of our civilisation. And to-day, even, in remote parts of the country, many apparently meaningless but immemorial customs are traceable to them, as, for example, the dropping of pins into wells and springs, which really perpetuates the offerings once made to propitiate the spirits of fountains and streams.[1]

Superstition also bore its part in sickness at this time, and as still with primitive races, so with Neolithic man, pain, illness and wasting disease could only be explained as the effects of such practices as sympathetic

[1] See also p. 238.

magic and witchcraft, or of "elf-shots"—invisible shafts shot at him by supernatural beings. And these beliefs likewise have lingered on for ages: for black magic and "elf-shots" could still be diagnosed in mediæval times, while witchcraft, for which people were tried and burnt by English law as late as the Eighteenth Century, still lives on furtively here and there amongst us. We cannot wonder, then, that Neolithic man was in every phase and action of his life influenced for evil as well as for good by supernatural agencies; or that the rising Sun God, for all his splendour, was not powerful enough to dissipate these clinging mists of superstition and magic.

But for us the important fact is that in spite of the existence of these powers of darkness in the land, the process of civilisation was at work throughout this period. And although so many of the evidences of progress have irretrievably vanished, and with them we know not what records of warm human everyday life, of social and economic organisation, of æsthetic and religious development, yet those few which have survived are, as we have seen, sufficient to reveal something of the indomitable spirit with which man faced and solved the ever-recurrent problems of existence—sufficient to indicate the considerable degree of civilisation to which he had already attained in Britain at the close of the Stone Age.

PART III

CIVILISATION IN THE BRONZE AGE

CHAPTER VIII

The Coming of Metal

THE first appearance of metal in Britain marks the beginning of the next stage in the development of our civilisation. And because bronze was pre-eminently the metal used for about sixteen hundred years, this period, approximately 2000–400 B.C., is known as the Bronze Age.

The once prevalent idea that the Bronze Age in Britain was brought about by invading hordes of a more highly civilised race than the old inhabitants—a race armed with bronze weapons against which stone was of no avail—is not supported by archæological evidence. We know now that this momentous change in culture was not the result of a sudden national cataclysm, but of the slow and imperceptible diffusion of new ideas. In fact, there was an intermediate phase of some two or three centuries in duration between the characteristic civilisations of the Neolithic and the Bronze Ages, such as we have previously seen connecting other broad stages of man's development. And it is this period of transition, together with the origins and growth of the new influences that brought it about, and the interaction between them and the old traditions, which we have to consider in the present chapter.

Yet, again, it must be repeated that these classifications of man's slow progress are not definite divisions of time like a king's reign, or the life of a parliament.

Rather are they stages of development merging indistinguishably one into the other, stages themselves varying in attainment and duration in different parts of the country, according, roughly, to the distance from the active centres of civilisation. This lack of uniformity has, of course, been constant, though in a lessening degree, down to the present day: thus, as regards many aspects of modern civilisation, not all of them material, we still speak of country villages here and there as being "behind the times."

The closing years of the Neolithic Age in Britain, as was previously mentioned, saw the influx of new peoples differing physically in many respects from the old inhabitants. But so little is known of them that their language, racial affinities, and the places of their origin still remain in doubt. That they were of two distinct races, both round-headed, is definitely proved by their skeletal remains. For the bony structure of their faces, and the shape and size of their other bones, show the one to have been harsh featured, taller, and more powerfully built than the aborigines, and the other even shorter, but thick-set and sturdy, with a facial cast mild and almost refined in appearance. It is known, too, that this immigration continued throughout the whole of the transitional period, and was, in fact, an intermittent and desultory affair of small groups or families landing in different places on the south and east coasts from time to time. Though here and there in the south they probably displaced or subdued the old inhabitants, yet in most other places they seem to have settled down amongst them more or less amicably, for much intermarriage ensued. Thus it was, as we have seen, that the customs of the newcomers in many ways influenced, and in turn were influenced by, the old population, until in course of time all racial difference was forgotten and new and old were blended in one common life and one civilisation.

And it was among this rapidly coalescing population of aboriginal "long-heads" and immigrant "round-heads," all in the Neolithic stage of development, that metal first came into use in Britain.

The profound importance of metal in the social and economic development of mankind would alone seem to make imperative some discussion of its discovery and early use. But that is not all. We know that metal was undoubtedly first discovered and worked by man in the East—Egypt, Asia Minor, and south-east Europe having each their special advocates—at some date between 4500 and 3000 B.C. But while many authorities maintain that the knowledge of bronze spread slowly from the East along the European trade routes, or by the coastal trade route, and was in this way at length transmitted to Britain, others deny this single source theory and roundly assert that this new industry originated here, independently of—though, of course, long after—its inception in the East. The latter chiefly base their arguments on the fact that our earliest metal implements are for the most part peculiar to Britain, and are not found in those places whence this culture is supposed by the others to have been derived. For, had these things been imported, they would inevitably have conformed to the types manufactured in those places; and, as inevitably, would have influenced the forms of our earliest native work. In like manner, had foreign craftsmen brought the knowledge hither, they must have worked at first on the lines of old habit, and the work of their hands would thus have betrayed the place whence they had come. But even if this industry had not an independent origin in Britain, yet its earliest practice here by Neolithic man must have been largely experimental; and thus he must have encountered many of the same difficulties which some fifteen hundred years earlier had arisen and been overcome elsewhere. So if we are

rightly to understand the early Bronze Age in England, we must endeavour to trace the steps by which man arrived at the use of metal.

First, then, we must recall the stage which late Neolithic man represents in the development of the human mind. Though he has no knowledge of metal he is notwithstanding a highly skilled craftsman, one who has learnt by long experience that different materials necessitate each its peculiar method of manipulation. He knows that stubborn stone may, according to its nature, be shaped either by flaking or chipping, by pecking or grinding; that the more tractable wood may be split and sawn asunder, planed, bent, cut, and carved into the desired form; that, with finger and thumb alone, the soft and plastic clay may be moulded at will into domestic utensils, and afterwards made serviceable by fire; and that other substances, such as horn, bone and leather, require their own distinctive treatment when manufactured into articles of use. He has carried the exploitation of nature, animate and inanimate, far beyond Paleolithic attainment; and on every side is using materials unknown to, or neglected by, his predecessors. Beyond them, too, he has progressed as a reasoning being, able to deduce facts from his experience, and with growing certitude to trace effects back to their ultimate causes. Thus more and more is he able to profit by accidental occurrences, and by developing their possibilities for use he is continually adding to the sum total of human knowledge. Such, briefly, was the man; and such his experience and outlook on life.

The first metal to be worked at all extensively was copper; but it is probable that it was known to man long before he could make use of it. The pure metal exists in a native state in many parts of the world, and among them in Cornwall, where it is found in small branching, contorted forms in the beds of streams.

Some early craftsman must have picked up this strange substance and, examining it curiously, must have learnt something of its nature by tentative experiments. Thus he finds it is hard to the touch like stone, yet it will not crack or fracture; tough and pliable like green wood, but it cannot be cut or split with a flint knife, neither will it burn in a fire; it can be flattened out like stiff clay, but only by hammering; and it requires blows of a sharp-edged tool to sever it. But the end of it all is that he probably strings together bits of the pretty coloured stuff as a necklace for some woman. Had the pure metal existed in Europe in great quantities, as in America, man would most probably have found out its malleable properties very early, and made implements of native copper hammered cold, as the North American Indians did. But its scarcity prevented that development, and so the Stone Age persisted until a further discovery was made.

Again it is a craftsman, a maker of things, who perchance having business in a distant village is benighted on his way thither, and so has to pitch his camp in a strange place for the night. He gathers together some scattered fragments of rock for his hearthstones, kindles a fire on them, and cooks his evening meal. Ere he sleeps, he builds high the fire for protection in the dark hours, and ever and again rises and tends it until the morning. Then, while grilling some meat on the still glowing embers, he accidentally drops his flint knife into the fire. With a stick he quickly rakes out the precious tool, and stooping thus he pauses motionless, his gaze attracted and held by something gleaming ruddy-yellow among the scattered ashes. We, perhaps, should recognise it as copper, and with much thought may have guessed the cause of its appearance there. But he could not know that the hearthstones chanced to be fragments of

an outcrop of rich copper ore—pyrites, probably, for such exposed ores occur frequently in Cornwall as elsewhere—and that his fire had partially melted and thus revealed the metal in them. Such a thing must have happened before in those districts where the surface ores abound, and been unnoticed, but now the hour and the man came together. He stretches out his hand involuntarily to the glittering stuff, but the heat warns him in time, and he waits until it is cool enough to be examined, and meanwhile breaks his fast. Then in the endeavour to detach it from the mass of ore he finds he must use his stone axe, and so discovers its nature to be the same as that other extraordinary substance found in a stream years ago by a fellow craftsman. And thrusting into his wallet this scrap of smelted copper with bits of ore still adhering to it, he goes on his way pondering deeply. On his homeward journey, full of curiosity, he camps again in the same spot, and his eager scrutiny next morning reveals the same result; and so with other fragments of metal he returns home. Soon the knowledge would begin to be spread about that this strange stuff could be obtained at will in such and such a place by merely lighting fires on the ground there. Following on this would come the recognition of the ore from non-metallic rock; and, later, the idea of crushing it and casting it in small pieces into the fire, whence the molten metal ran into small thin cakes among the ashes. Some genius then thought of building the fire over an earthenware bowl, or crucible, to collect the trickles of the liquid metal; and so came the wonderful discovery that, on cooling, the metal took the shape of the vessel containing it, as water does when frozen solid in a bowl; and from that to the casting of copper in definite shapes by means of moulds was an easy step. Later still would follow some contrivance—some primitive form of bellows—to increase the heat of the fire by means

of a forced draught; and with the use of charcoal as fuel instead of wood, man, even in the early Bronze Age, had evolved an adequate, if crude, smelting furnace which, in places like Japan, persisted practically unchanged down to recent times. By such stages as these, though perhaps not so directly, prehistoric man arrived at the use of metal.

This stage of development, when, in many countries, copper was the only metal worked by man, is often spoken of as the Copper Age. But very early it was accidentally discovered that the addition of a small proportion of tin to copper resulted in an alloy which, unlike copper, was hard enough to take an edge and keep it; and, at the same time, was better adapted for the process of casting in closed moulds. This alloy is, of course, bronze, and its superiority over copper for the needs of the time was speedily recognised and accepted, and copper, in its pure state, was no longer used for the manufacture of implements.

There is some little evidence to suppose that in Britain, as in Ireland and elsewhere, copper preceded bronze in the early part of this transitional period. But it is certain that implements soon began to be made of a bronze which was very poor in tin; and though it was in all probability at first an unintentional bronze—because in Cornwall tin and copper ores are found together—it was shortly followed by a true bronze containing about the ten per cent. of tin, which thereafter remained the usual proportion. Thus this metal began to appear in the Neolithic civilisation of Britain, one implement here and one there. And we can readily understand the envy and awe with which the happy possessors of bronze were regarded by their fellows who, because the precious metal, for this reason or that, was as yet unobtainable, had perforce to continue to use the stone implements of their fathers.

Direct evidence of the scarcity and consequent preciousness of bronze is the infrequency with which it was buried with the dead at this period; while stone implements, which could be more easily replaced, have been found in the barrows in great numbers.

On looking back from this point at the evolution of man's implements, it is noticeable that, subsequent to his first haphazard club, his chief endeavour hitherto has been the attainment of the edge and the point. These unceasing efforts were prompted mainly by the need for tools rather than for weapons; because, while in the last resort any club or bludgeon can slay as surely as axe or dagger, no progress at all is possible to man with a club as his only tool. Now, the most important tools fall, broadly speaking, into three groups —the hammers, the cutters, and the piercers. The first-named are the earliest tools of man, as witness his clubs and hammer-stones; and it is only because these tools are so simple and can be so easily substituted that they received comparatively little attention in early times; and even to-day, when in want of a hammer, we readily use the first hard thing that lies at hand—a brick, or the back of a hair-brush. But the case is very different with regard to the second group of tools, the cutters, for nature does not furnish ready-made edged tools of much efficiency; and the best chance-fractured stone is a poor substitute for a knife. Hence, from eolith to latest neolith, we see man labouring continually to produce from an impossible material a cutting implement which should be adequate to his need; and his utmost achievement in durability of edge is probably his blunt celt, or axe, ground to a cutting angle rarely less than forty-five degrees; and, in keenness, the fragile edge of a flint flake as transient as a dream. As for the third group of tools, the borers, piercers and pointed weapons, both stone and wood are poor materials for such implements, and bone but little

better, for the point had to be held up by so much bulk that its efficiency was marred to a great extent. We can imagine, then, with what joy the craftsman discovered the properties, or hailed the advent, of bronze; and it is small wonder that for hundreds of years—until, in fact, it became relatively plentiful—this metal was, with the exception of a few ear-rings, used *exclusively* for the manufacture of either edged or pointed implements, chiefly the former.

One other point about this early bronze culture is interesting: man, having arrived after untold centuries of endeavour at the best possible shapes for tools made of stone, naturally regards these shapes as the only possible ones; with the consequence that when

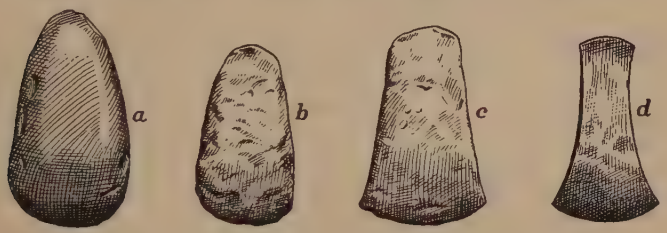

Fig. 25.—Early metalwork [¼].
Polished stone axe (*a*), and early copper axes (*b*, *c*), from Ireland.
Early bronze axe (*d*), Butterwick, Yorks.

first he makes his implements of metal, their forms are the forms of stone, this feature being especially noticeable in the early axes (Fig. 25, *a*, *b*).

These flat bronze axes, generally called celts, broad thin knife-blades which were riveted at the base on horn or bone handles (Fig. 26), small awls, and ear-rings, were, as far as we can tell, the only bronze articles manufactured by the early metal-workers of Britain. And all the other implements which man used at that time, whether of stone, wood, bone or horn, continued to be late Neolithic in type.

Summing up the evidences with regard to this

period of transition, the only innovations which we have any reason to ascribe to the immigration of the "round-heads," are those which have already been alluded to in previous chapters—the introduction of the pottery beakers, the first practice of cremation, and the change in the shape and structure of the grave mounds. We should, however, note that the long barrows of the Neolithic Age became entirely superseded during this period by the round barrows of the Bronze Age; but, as these will be considered later, at some length, they need not be more than mentioned in this place. In all other respects, then, we should regard the social and economic life of this mixed, but rapidly coalescing population of Britain as continuing the traditions of Neolithic civilisation in spite of the coming of metal; for the far-reaching effects of its discovery or adoption were, of course, hidden from them.

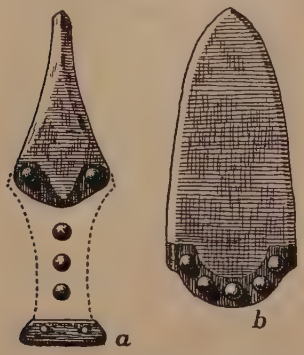

Fig. 26.—Early bronze knives, or knife-daggers. Original shape (*b*), worn by use (*a*). (*a*) Helperthorpe, Yorks; (*b*) Homington, Wilts [¼].

We, however, are at the present day in a position to estimate the value of this discovery by its subsequent effects. But if, with the use of metal once established, modern civilisation seems suddenly to come within the range of human possibilities, henceforward to be only a matter of time; and if, when thinking of the extent to which metal holds, as it were, together our vast, complex, social and economic fabric, we are convinced of the supreme importance of this discovery—yet we must not allow ourselves to be misled thereby. For, after all, the fundamental factor of human

development is mind and not matter. And the more carefully we study these things, the more clearly shall we see that all human achievements—be they in stone or metal, in civic charter or universal suffrage—are of a piece and alike in being but manifestations of the growth of the spirit of man.

CHAPTER IX

Economic Developments

JUST as the inhabitants of Neolithic Britain had been far more numerous than those of Paleolithic times, so were they in turn greatly exceeded by the Bronze Age population. Indeed, the growth of the population during this period was such as cannot be wholly explained by the natural rate of increase. The round-headed invaders, of course, added their quota which, though probably small at first, would amount to many thousands in the course of centuries. But another contributory cause, and one more important to our survey, lay in the improved conditions of existence, presently to be discussed, which led directly to a diminished death-rate.

Hence, as we have seen in a previous chapter, with this increasing population, we must picture Bronze Age Britain as being more extensively cultivated than before, its dense primeval forests slowly dwindling on every side as wider tracts are cleared for arable and pasture. We must realise that habitable villages are springing up, and the voices of children at play are heard in places which, since time was, had echoed only to the cries of wild beasts and birds, or to the dying screams of their prey. But this change in the aspect of the land was more apparent in the higher ground as yet; for undrained lowlands and marshy bottoms alike offered small inducement to man for settlement. Another point arises, the extensive clearings of the

forest-land inevitably brought about a growing scarcity of game. Thus, it is very clear that, as this process continued, man was forced to produce more and more food by the labour of his hands, with the result that towards the close of this period his diet was in direct contrast to what had been general in Neolithic days. His hearth-fires at this time prove that the flesh of wild animals formed so small a proportion of his flesh foods as to be practically negligible from an economic point of view; and that his meat was chiefly that of the ox, pig, sheep and goat, and in that order of frequency. There is much evidence, too, that the cattle were generally slaughtered before reaching maturity, probably, in part, owing to the dearth of winter feed—hay and root crops being as yet unknown—and, in part, because the milk which the calves would have consumed was desired or required for human food. Likewise man's increasing use of grain foods, probably ill-cooked and containing much grit from the stone querns used in grinding the corn, is revealed by his teeth, which in the skulls of this period are, as a rule, worn down much more than in those of the Neolithic Age when flesh was the chief article of diet.

The only other natural supplies of food—fish, and the autumn harvest of fruit, berries and nuts—were obviously limited either to place or time. Shellfish, we know, was eaten in the settlements near the coasts; while salmon and trout were probably netted or speared in the rivers and streams, or even caught by hand after the manner of modern poachers who tickle for trout; for such tricks of wood-craft and water-lore are of immemorial antiquity. Yet, withal, it is remarkable that only one bronze fishhook has as yet been discovered in Britain, though numerous specimens have been found on the continent.

From the foregoing, then, we can realise something of the importance of agriculture and cattle-raising at

this time, and of the increasing extent to which both were practised. As the forests were cut down oxen were employed in timber-hauling; and, almost as certainly, they were afterwards used in ploughing the soil, because so much land was brought under cultivation that the primitive methods of the Neolithic Age must soon have become inadequate to the task. And so, with bronze tools increasing in number and efficiency, the work of the farm was better done and done more quickly; and profiting by these things, but more still by experience, man was enabled to produce, during the latter part of this period, all his necessary food by labour in the fields.

Thus, dating from the Bronze Age, there is one factor in the life of our country which remained constant in all its essentials down to the early part of the Nineteenth Century. Creeds changed; political systems altered; invasion followed invasion; wars and pestilences waxed and waned; yet agriculture and pasturage continued the same old round of activities, and throughout these thousands of years the great mass of the population continued perforce to work on the land for the production of food. This is the fundamental fact underlying all the economic and social phenomena of our developing civilisation; and though it is often disregarded, we cannot possibly obtain a just knowledge of any period of history unless it is always borne in mind. Villagers or tribesmen, villeins or serfs, yeomen or peasants, farmers or yokels, under whatever name or style they are known, their office was the same and their numerical preponderance in the population of the country persisted from century to century. And thus it is in relation to this changeless background of country life and activities, and *not* as a thing apart, that we should watch the shifting pageant of history as well as the progress of civilisation.

Among the more important evidences of progress

during this period are, of course, the bronze implements; and in them can be clearly traced the growing skill with which man adapted metal to his needs. The evolution of bronze casting is especially interesting. Following on the discovery, or information, that copper could be cast in moulds, the natural step would be to take an impression of some ordinary implement in clay and pour the molten metal into it. Then, later, as different forms were evolved, the moulds were accordingly modelled in clay or carved in stone.[1] But this method of casting in open moulds could be used only for flat implements, such as knives and celts, because however the mould was shaped, the upper surface of the metal being exposed to the air would, of course, be flat. So man arrived at the use of the closed mould which is, as it were, two open moulds held face to face; and thus he could cast in the round—each half of the mould reproducing its half of the implement.[2] Hard on the use of closed moulds came the first practice of hollow-casting in the provision of implements with a socket, which development was evidently due to the old problem of hafting. To achieve this, the mouth of the mould was made larger and circular, and a small clay core representing the end of the shaft was held in place within it by a bit of wire—traces of which can still be seen on some sockets—and then when the implement was cast, the clay core was scooped out of it, leaving a socket in which the handle could be inserted.

Later still, when such implements as spear-heads were increasing in size, the consequent but undesirable results became very apparent in the extra weight, and the prodigal use of the precious metal. And these disadvantages were obviated by a further and wonderful development of hollow-casting, by means of which the whole implement could be made hollow. To

[1] See early forms of the axe, p. 119, Fig. 25.
[2] See the half of a closed mould, p. 141, Fig. 30 (*i*).

understand this process let us watch a craftsman at work on a spear. First he makes what looks like a model of a blunt-edged spear-head in clay; but this is only a material representation of the hollowness of the spear, or, briefly, the core of the mould. Next he covers this clay form with a thin, even layer of wax, carefully modelling it to the exact edged and pointed shape he desires the spear to be when cast. This wax spear-head he covers in turn with clay, and this last clay covering is the mould proper. Then he proceeds to pour the molten bronze into the mouth of the mould, and as he does so the hot metal melts and burns up the wax and takes its place between the core and the mould. When it has cooled, he breaks away the outer clay mould, disclosing, like the kernel of a nut, a bronze spear-head, apparently solid, but really consisting of a thin shell of metal still containing the original clay core. And his last task is to scrape out the clay core, leaving the spear-head hollow throughout. This method of casting is still used at the present day for statuary, and is known as the *cire perdue* process. But while there were many reasons for its superiority over the older methods for most purposes, in all probability it chiefly appealed to the Bronze Age man because of its economy of weight and metal: for example, we may note a hollow spear-head of this period found in the Thames, which, though it is twelve and a half inches long, weighs only seven ounces; but which, if solid, would weigh two pounds at least.

While the numerous and varied implements of the Bronze Age need not be discussed at length, both the axe, or celt, and the spear-head, claim some consideration: the former because in its many forms it continued to be the most ubiquitous of man's tools, and the latter because it was throughout distinctively British in type.

It is interesting to trace the evolution of the bronze

celt through its various shapes. The first metal celts, as we have seen, imitated ordinary Neolithic forms;[1] but as man came to learn the properties of this new material new forms were developed. The first departure was a broadening of the cutting edge consequent on the hammering necessary to harden it (Fig. 27, *a*). This feature, further accentuated by a reduction of

FIG. 27.—Stages in the evolution of the bronze celt [$\frac{1}{4}$]. (*a*) Butterwick; (*b*) Moot Low, Derbyshire; (*c*) Plymstock, Devon; (*d*) R. Avon, Somerset; (*e.* 1) Quy, Cambs.; (*e.* 2 and *f*) Carlton Rode, Norfolk; (*g*) High Roding, Essex; (*h*) Wilts; (*i*) Thames, Kingston.

width at the waist and butt end, was repeated in new castings. Then flanges began to appear along the sides, and quickly grew higher—this form being called the "flanged celt" (Fig. 27, *b*, *c*). The first metal celts had possibly been hafted like the stone

[1] See p. 119, Fig. 25.

ones, but with the flanges came the elbowed haft. This was a specially chosen piece of wood, having a natural right-angled bend at one end of it, the long arm of which formed the handle proper, while the short arm was cleft to hold the celt. By this device the wooden prongs, fitting between the metal flanges,[1] would stop any lateral movement of the celt when once bound in its place with cords. The old tendency for the tool to split the haft was prevented by thickening the celt midway (Fig. 27, *c*); and this feature quickly developed into a definite stopridge on each face, against which the ends of the prongs fitted (*d*). Next followed the amalgamation of flanges and stopridge, providing thus a deep slot on each face for the reception of the prongs; and with the addition of a metal loop for the binding cords (*e*. 1), we arrive at the form generally known as the "palstave" (from an Icelandic word denoting a spade), which persisted to the end of this period. But the final and commonest form was the "socketed celt" (*g*, *h*, *i*); and this was derived from a further growth of the flanges into wings (*e*. 2) which curved over until they completely enclosed the prongs of the haft (*f*). These socketed celts, like palstaves, were generally provided with loops; and in some of them the ancestral wings were used as a decorative motif (*g*, *h*).

Through a sequence of changes even more regular, the distinctive British evolution of the bronze spear-head presents a spectacle unmatched elsewhere. The first indigenous knife-dagger of the transition,[2] with its broad, rounded base riveted into a horn or bone handle, fathered the true dagger, which was slightly longer and narrower, with a developing mid-rib, but which retained the same riveted handle (Fig. 28, *a*). And, later, when man thought of using bronze instead

[1] See p. 131, Fig. 29 (*a*, *b*).
[2] See p. 120, Fig. 26.

of flint or bone for his spear-heads, he adopted the dagger form for that purpose and added a tang (*b*), and, soon afterwards, a ferrule to prevent the tang from splitting the shaft (*c*). Then the tanged spear-head and the ferrule were cast in one piece, and the tang, now useless, was speedily eliminated, leaving a socketed spear-head (*d*) which, for a short time, was fastened on the shaft with a pin or peg. This method of attachment of handle and socket—in general use to-day—was,

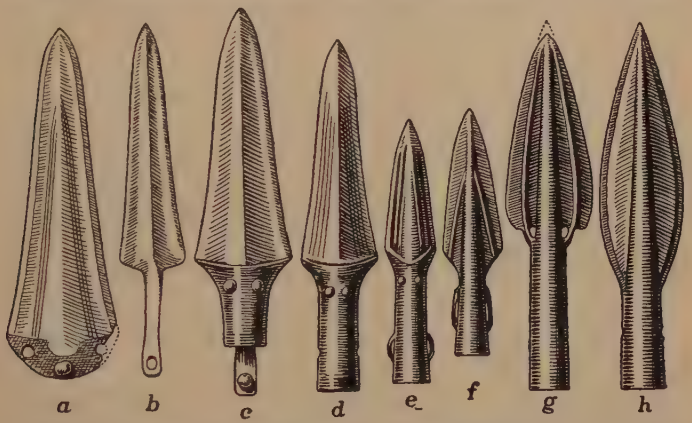

Fig. 28.—Stages in the evolution of the spear-head: (*a*, *c*) Snowshill, Glouces.; (*b*) Hintlesham, Suffolk; (*d*) Arreton Down, I. of Wight; (*e*, *f*) Ireland; (*g*) Elford, Northumberland; (*h*) Heathery Burn Cave, Durham. [About $\frac{1}{5}$.]

however, followed by a temporary reversion to the primitive device of binding; and metal loops[1] through which the cords were passed appeared low down on the sockets (*e*). Then the socket began to be extended up the mid-rib (*f*); and the loops likewise moved up to the base of the blade (*g*), and, finally disappearing, pegs came into universal use. At this point, the blade had arrived at the "leaf-shaped" outline (*h*) most characteristic of the Bronze Age spears; and

[1] Cf. celt and palstave.

henceforward, except for the hollow-cast spears already considered, all further developments are only minor and unimportant variations of shape. In conclusion, it may be mentioned that the spear-shafts, judging from the fragments of them which frequently still remain embedded in the sockets, were generally made of yew, but occasionally of pine.

But the bronze spear-head was not the only weapon to be derived from the early knife-daggers. The sword likewise had the same origin; and its developmental stages may be briefly noticed thus: knife-dagger, true dagger, elongated dagger, rapier sword, all with handles riveted on them. But towards the end of the period, and during the subsequent transition, another form appeared; this being the leaf-shaped sword cast with a thin, flat hilt which was thickened for the grip by plates of horn, bone, or wood, riveted on either side of it. The last type, however, probably had a continental origin, for some examples show signs of the Hallstatt influence—of which more later.

These daggers, spears, and swords were the principal bronze weapons at this time, though a few halberds and maces show that other types of weapons were not unknown. Bows and arrows, however, were still universally used in the hunt; but as innumerable arrow-heads of flint have been found and not a single one of bronze, we may suppose that bronze was always too precious to be thus employed, where loss would be frequent and inevitable. Yet, though chiefly used for the hunt, flint arrow-heads have occasionally been found deeply embedded in human vertebræ; and what vivid suggestive pictures spring to the mind when such things are suddenly encountered in some dark corner of a museum!

Livelier and, generally speaking, truer pictures are presented by the bronze tools, for, after all, these are more numerous and varied than the weapons. The

ubiquitous celt, whatever its type, was essentially a tool used as an axe, and, with a straight handle, as a spade or hoe. And among others may be mentioned the knives, chisels and gouges, both tanged and socketed;[1] saws, hammers and awls; and curved sickles, at first riveted and later socketed, the latter type being practically confined to these islands.

All the foregoing implements, weapons and tools alike, were maufactured by the process of casting. But during the last few centuries of the Bronze Age certain articles began to be made by another method—

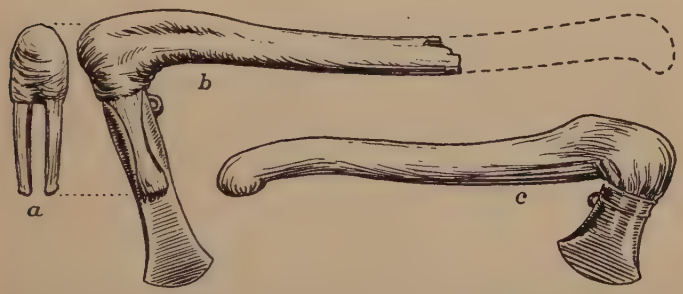

Fig. 29.—The hafting of celts. Front and side views of haft (*a*, *b*) for flanged and winged celts and palstaves; Austria. Haft for socketed celt (*c*); Ireland [$\frac{1}{6}$].

thin plates of metal being beaten out to the required tenuity by hammering, and then cut into shape and bent and riveted together, soldering not being known until the following period. Thus hollow vessels, such as cauldrons,[2] were made; trumpets likewise, though these were sometimes hollow-cast; and also the circular shields called bucklers, distinctively British in type, which have a large central boss surrounded by raised concentric rings and lesser knobs or studs. All these things show considerable skill in their manufacture,

[1] See p. 141, Fig. 30 (*d*, *e*, *f*).

[2] See p. 141, Fig. 30 (*k*).

the bucklers especially, as in them this new craft has also been used for artistic ends, the decoration being embossed by hammering—a process now known as *repoussé*.

While the progress and range of bronze culture are very evident when summarised like this, and also when the implements themselves are seen in close juxtaposition in museums, still we must not forget either that the crude flat celts and the finely wrought bucklers were as widely separated in time as are the Roman evacuation of Britain and the present day; or that in some parts of the country metal was scarce and precious even at the end of the Bronze Age. Hence, inevitably, implements of stone, horn, and bone still continued to be made and used side by side with bronze. We have already noticed the influence of stone forms on the early metal work; but now, when distinctive metal forms had been evolved, these in turn reacted on the contemporary stone culture. The stone axe-hammers, used in battle to the end of the period, are a case in point; because in them can be clearly seen the spreading, curved cutting edges, characteristic of the flanged celt, laboriously copied in an unsuitable material. Among the other stone implements still in use were flint saws and scrapers; adzes and hammers; querns or hand-mills for grinding corn; whetstones and grindstones; and bracers, or wrist-guards, used by bowmen when shooting their flint-headed arrows. And among the horn and bone implements, hammers, knives of various sorts, and gouges may be mentioned.

Such a varied and extensive use of bronze, as we have been considering, could not have occurred in Britain either without definite centres of manufacture both of the raw material and the finished implements, or without definite trade relations between such centres of manufacture, and likewise between them and the population at large. Mining and metal-smelting communities

came to be established both in Cornwall and Wales, where the metal ores abounded. A remarkable discovery has been made in Anglesey of a foundry, where the floor, after all these centuries, was still strewn with slag, with broken quartz from copper lodes in the neighbourhood, with mullers and mortars for crushing the ore, and with the remains of the smelting furnaces in which the metal had been melted before it was run into separate ingots or cakes. After the ingots were cast they were traded with the manufacturers of implements in all parts of the country. And this is proved by the fact that on sites far removed from the mining districts there have been found these ingots, as well as moulds, waste pieces of metal,[1] rough untrimmed implements straight from the moulds, and the various tools necessary for the completion of the finished articles. The final stage was the traffic between these craftsmen and the public, carried on by means of barter, as in the Neolithic Age.

But the most significant feature of the internal trade development in the latter part of this period is the definite appearance of the middleman, or merchant. And if at this time he assumes the innocuous guise of a distributing agent—being, in fact, a travelling pedlar—nevertheless he shatters the simple and direct relations which had hitherto existed between producer and producer with their mutual exchange of commodities. And the inevitable result is that the cost of an article is no longer the cost of its production, but that of production plus distribution. This, of course, is a quite justifiable increase, because the pedlar is entitled to an adequate remuneration for his services. But a thought arises at this juncture—how soon did the middleman begin to realise the possibilities of his unique position, and endeavour to make an excessive profit by buying cheap and selling dear? It is probable that the Bronze

[1] See, for example, p. 141, Fig. 30 (*h*, *i*, *j*).

Age saw the birth of this non-productive, parasitic spirit which later was so apparent in the forestallers of the Middle Ages, and has since grown to be one of the most urgent problems of modern social economics. What makes it probable is that we find that numbers of the bronze-workers found it worth their while to travel the country themselves, carrying crucibles, moulds, and ingots of metal with them, bartering new implements for broken and worn-out ones, melting down old types and recasting them in the latest fashions, and doing repairs and tinker work generally.

These two distinct classes of itinerants have left numerous indisputable evidences of their activities behind them, for they, following the general custom of this period, buried their belongings for safety in troubled times. These deposits, called hoards, will be considered later; but here we may note that the merchants' or pedlars' packs of brand-new implements, and also the bronze-founders' or tinkers' equipments with the old and broken tools collected for recasting, have been discovered in many places.

From the foregoing we can picture these wayfaring people with their pack-horses following the ridgeways from village to village, in their passing stamping yet more indelibly the routes already thousands of years old, meeting here a flock of sheep changing pasture, there a funeral procession on its way to distant Stonehenge, and yonder a countryman with an ox-sledge piled high with the harvest of the fields; and when night comes, sleeping, if needs be, under the stars in the lee of a thornbush, or in some friendly hut—welcome if only for the news they bring, or for the wonderful travellers' tales they have to tell. And in the morning, with the headmen of the village gathered round, the pedlar's pack is opened, and the chaffering and bargaining begin; or the tinker sets up his little furnace just outside the door of the hut, to the huge

entertainment of the village children, who gather round to watch him at work.

That much of the internal trade was carried on in this manner is certain, though cattle-raising communities and agriculturists continued to barter their surplus produce, meat, wool, skins, corn and flax, as their forefathers had done before them. It is just possible, however, that some standardised medium of exchange was in process of being evolved at the end of this period; but as little or no evidence has as yet come to light, we must postpone for the present all discussion of money and its effects on social economics.

Evidences of foreign commerce are likewise numerous and indisputable, and we can with absolute certainty ascribe the definite beginnings of our British export and import trade to this period, though at the same time we should remember that it was probably not due to native initiative. Owing to the accident of insularity and the remoteness of this country from the cultural influences of the East, the civilisation of Britain developed much more slowly than that of southern or even central Europe, with the consequence that British imports were manufactured articles, and the exports chiefly raw materials. There was always much intercommunication between this country and France in prehistoric times, and during this period Cornish tin and Irish gold were exported thither, and numerous French celts imported. Hence it came about that Phoenician traders visiting the south of France heard very early of the tin-mines of Cornwall; and it was this knowledge which led at some date, possibly as early as 1000 B.C., to the commencement of a regular export trade in tin from Britain to the eastern Mediterranean, apparently via Cadiz, which port seems to have been founded by the Phoenicians mainly for this purpose. And it was probably this trade which explains such things as the presence of Egyptian glass

beads in British barrows. But not only from the south, from the north also, came traders to our shores, for British bronze, celts, and bucklers, and Irish gold found their way to Scandinavia, while much of the amber in use in Britain at this time was probably brought thence in exchange.

There are other evidences of foreign intercourse, which, for reasons of space, we cannot discuss. But we may however just note in this connection that rock-carvings of this period representing large ships without sails have been found in Sweden, Ireland, and in north-west France—a significant fact pointing to a widespread knowledge and practice of navigation in the Bronze Age.

CHAPTER X

Individual and Family Life

In innumerable ways the life of the individual in Bronze Age Britain was affected, often profoundly, by the contemporary economic developments. But first and foremost was the distinct amelioration of the actual conditions of existence which followed in their train. This is proved by the facts that even during the first half of the period women, especially, improved so much in physique as to show little, if any, of that inferiority to men which had hitherto been so marked; and that both men and women lived longer, for the average life at this time was about fifty-five years, exceeding by some eight years the average Neolithic life. Such pronounced changes as these must have had many contributory causes; but chiefly they would seem to be the result of the more adequate and regular food supply previously discussed, and also of better housing.

Although the habitations of Bronze Age man for the greater part continued the traditions of the Neolithic Age, so that pit-dwellings, lake-dwellings, and beehive huts were built as formerly, yet now they showed such improvements of construction and workmanship as would naturally follow on the use of more efficient tools. Evidences of this progress in domestic conveniences and amenities have been discovered in another type of dwelling which appeared, probably for the first time, during this period. The lower courses of the stone walls of these huts are still to be seen in many

parts of the country, the best-known examples occurring in Cornwall, Dartmoor, Anglesey, and Northumberland ; and because they are circular they are generally called "hut-circles."

Hut-circles are most frequently found clustering in tiny hamlets of five or six ; but there is one large group near Holyhead where more than fifty of them can be counted, which shows that larger villages also existed. Built of dry stone, the walls are about three feet thick and enclose a floor space from fifteen to twenty feet in diameter. Two large upright stones, four or five feet high, as door posts, still mark the entrance to some of them, and probably indicate also the height of the doorway. This is interesting, as it shows some progress towards civilised standards, because primitive people in all parts of the world favour very low doorways to their dwellings. The huts seem to have been roofed by means of poles laid on the walls, and covered by sods of peat or turf ; the roof in some instances being further supported by an upright centre post. As regards interior conveniences, the floor was occasionally paved ; and though most of the huts were provided with fireplaces the cooking was sometimes done just outside. Some of the huts were divided into small rooms by stone partitions, in which case each room seems to have had its separate fireplace. But even with this development, there is no evidence of windows, and almost certainly there were none, because, broadly speaking, windows, especially in outside walls, everywhere indicate a peaceful state of society if not a high degree of civilisation. Their absence, however, was not due to lack of architectural skill, for in some of the huts, which were used chiefly as workshops or bronze foundries, a well-formed chimney was built in the thickness of the wall ; a remarkable achievement at this stage of development, both from the inventive and constructive standpoints.

But, provocative of thought as the hut-circles are, the most significant—if obvious—thing about them is apparent also in the other early dwellings of man. One and all, they reveal in their construction that same economic principle which underlies the whole development of our domestic architecture, and gives to it that variety which is one of its greatest charms. Briefly, it is the exclusive use within a locality of its natural resources as building materials. Thus, wood in a wooded country, stone where stone was found, and turf, peat, bracken, reeds, and the soil itself, each in the district where it abounded, were employed alike by man in the structure of his homes.

With these capabilities and these attainments, it seems at first sight remarkable that men should here and there continue to dwell in caves, either permanently or temporarily; and stranger still that they were not necessarily the poor and ignorant, but in some cases were skilled in bronze working and possessed of more than ordinary wealth. Nevertheless, the fullest evidence on record of the improved domestic economy of this period came to light under these conditions, and in an environment such as would seem to imply that man had made no progress whatever since the Paleolithic Age. The discoveries themselves, however, tell a very different tale. The whole property, personal and household, of a late Bronze Age family has been found, together with the bones of its possessors, preserved under the stalagmite floor of a cave, known as the Heathery Burn Cave, in Durham. The cave was about five hundred feet long and from ten to thirty feet wide, with a tiny stream running through it. And there, in addition to innumerable fragments of pottery and many worked pieces of horn, bone and wood of indeterminate use, nearly two hundred manufactured articles of bronze, gold, lead, stone, bone and horn were collected, of which only twelve were weapons, the rest comprising

tools, domestic utensils, and articles of personal use and adornment.

From these undisturbed records, and from the conditions under which they were found, it is possible to reconstruct a picture of the life of the period. This family doubtlessly had their usual dwellings near the narrow wooded gorge in which the cave was hidden; and they alone having knowledge of its existence retreated to it from time to time as to a place of refuge when the countryside was ablaze with inter-tribal strife, or ravaged by sporadic invasions from the coast some thirty miles away. And here they had dwelt for what in the aggregate was a considerable period, pursuing their customary avocations in safety until—— But as the fate of this very human family was touched with tragedy, let us look a little more closely at the final chapter.

Once again the alarm is spreading from hamlet to homestead—the enemy is coming! And because there are few or no hill-forts in that sparsely populated district, the inhabitants, carrying their belongings and driving off their flocks where possible, scatter and flee before their oppressors to hiding-places in the hills or forests. Once again this family of ours receives sufficient warning for them to remove their possessions from their homes to the security of the cave, and also to pen a certain number of cattle in one part of it, the rest of their beasts being concealed as well as possible in other ravines or gorges near at hand. And thus once again the cave becomes a human dwelling-place. It is not a desirable habitation, certainly, damp and dark as it is, with a constantly dripping roof, and a stream—to which it owed its formation—still running throughout its length to join its fellow in the gorge; not desirable, but better than robbery, wounds, captivity, or death. So with fires blazing here and there, and with lamps alight to relieve the gloom, these

folk make the best of a bad job as they had done so often before; and except for the watch kept at the head of the gorge the usual round of activities employs their days. The women spin, and weave the threads into linen and woollen cloth; they make garments and mend them, and sew on buttons of bronze (Fig. 30, *a*) and

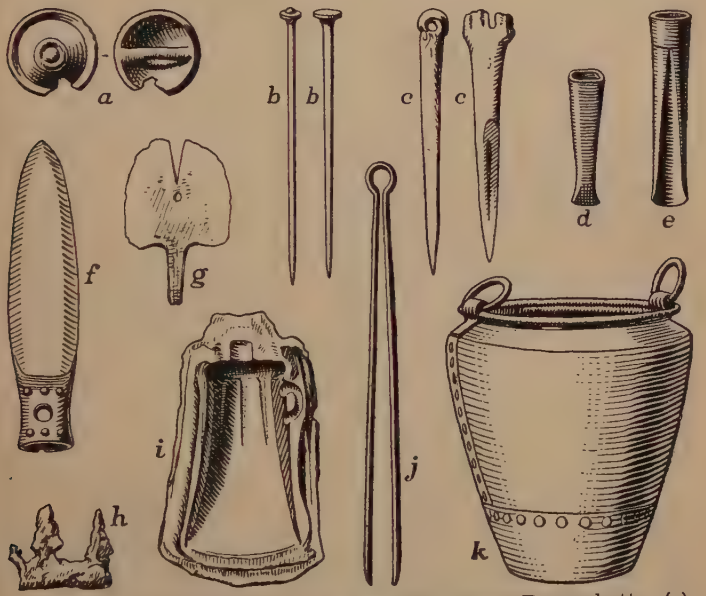

Fig. 30.—Objects from the Heathery Burn Cave: Bronze button (*a*); pins of bronze (*bb*) and bone (*cc*); chisel (*d*), gouge (*e*), knife (*f*), and razor (*g*), all of bronze; waste piece of metal (*h*), half-mould (*i*), and tongs (*j*), used in bronze casting; cauldron, restored (*k*). *a* [$\frac{2}{3}$]; *k* [$\frac{1}{12}$]; *j* [$\frac{1}{7}$]; the rest [$\frac{2}{7}$].

bone, like any modern housewife. Besides preparing and cooking the food, they grind the corn, milk the cattle, and do the dairy work. They tend the lamps, melting down mutton fat for oil; and the fires, providing the fuel from the abundance at the cave mouth. Likewise the water supply is their responsibility, and whenever

a meal is towards, one or other of the women a little breathless from hauling in a bundle of faggots pauses a moment to repeat their time-honoured joke—"The enemy has done *us* a good turn anyway—no bother of carrying water now—more than we want here!" Then as the meal itself is being prepared, a stew of mutton and herbs, their big bronze cauldron (Fig. 30, *k*) is found to be leaking—some one perhaps had dropped it in that hurried "move" to the cave—so the meat has to be cooked in earthenware pipkins standing in the hot ashes. But one of the men can work in bronze, has, in fact, been melting up and recasting a broken socketed axe that morning (Fig. 30, *h*, *i*, *j*); and when dinner is over he beats out a bit of bronze and rivets yet another patch on the already much-bepatched cauldron, and makes it as good as new. Other of the men have been out warily to get forage and litter for the cattle; or to cut fresh brushwood of which, when covered with skin rugs, their own beds are made; or, again, on a scouting expedition, returning from which they visit their huts and come back laden with the last of their corn in sewn skin sacks. And so the busy secluded life of the family goes on for some weeks, while the children, cautioned never to leave the cave, find endless amusement in sending chips of wood sailing down the cave stream and out into the world beyond; or in romping with their great dogs, big as wolves; or in half-fearful games of hide and seek in the many dark corners of their temporary home.

Then comes one terrible day, when for interminable hours the whole family sits crouching in the blackness of the cavern, fires stamped out, lamps extinguished, listening with bated breath in a silence broken only by the eerie cluck of the stream in some tunnelled hollow of the rock, and the slow irregular patter of water-drops percolating through the roof. The strain of waiting grows intense, and ever and again a frightened child

whimpers in the darkness and is hushed by the brief but soothing murmur of its mother. Then suddenly the dogs begin to stir and growl, and are with difficulty kept silent, all save one. There is a scarcely perceptible flash of a bronze knife (Fig. 30, *f*), and with a choking sob the half-trained brute falls on his side and is still—a life for many lives. Now faint but growing sounds of crackling underwood are heard outside—some of the enemy are passing through the gorge. And the men, gripping their spears[1] and swords, creep stealthily nearer to the cave mouth, their dogs at their heels bristling but silent, and there they stand waiting, waiting. Distant calls are heard, and the footsteps in the gorge quicken in response, and presently die away in the distance; but still that tense expectant hush fills the cave—have they seen anything?—will they return? Thus the day drags on to evening, and in the dusk the men venture out as far as their huts to find only a heap of smouldering ashes, and to return to the cave with rage in their hearts. There once more a fire is cautiously kindled, well back in the cave, with sparks from a flint striker and a lump of iron pyrites—the forerunner of flint and steel—and so, with a guard set at the entrance to the cave, they eat and sleep.

Uneventful days follow; and when the tide of invasion ebbs from the district the men begin to build their huts again, still, however, returning to the cave for meals and sleep. The weather breaks, and heavy rains set in. The stream in the cave encroaches more and more on the floor space, and the children's boats are so swiftly whirled away that sailing becomes poor fun. But the huts are not yet finished, and despite the growing discomfort and discontent the family must perforce remain where they are. Then comes a night of furious storm with a deluge of rain. The swollen stream in the narrow gorge gets blocked with falling

[1] See p. 129, Fig. 28 (*h*).

trees, and a temporary dam is formed. Swiftly the water rises. The cave is flooded. Fires are extinguished. And in that horror of boiling blackness the occupants are drowned ere they can escape, perhaps even in their sleep. In all probability the cave mouth likewise became choked up that night with the débris of the storm, and was thus concealed from sight; because the mingled bones and possessions of this ill-starred family remained for many centuries scattered about the gravel floor of the cave just as the water had left them—remained untouched and undisturbed until the slow drip from the roof had buried them beneath a layer of stalagmite.[1]

Little is actually known of the dress of these people and their contemporaries. It is certain, however, that they had garments of linen, wool, and soft leather such as deerskin and sheepskin; and that these were cut and stitched into shape, and fastened by means of buttons and pins (Fig. 30, *a–c*). While the chief items of dress probably were a girdled linen tunic barely reaching the knees, and a woollen or fur-skin cloak for the men; and for the women a longer smock and a larger mantle; we should note the many discoveries of razors (Fig. 30, *g*) and tweezers as proof that both sexes were alike concerned about their personal appearance.

Further evidence of this very human trait is manifested throughout the period by that love of personal adornment which is characteristic of primitive peoples, and admittedly not absent in modern civilisation. It may be that this usage sprang from, and is perpetuated by, an egotistic desire to attract attention to oneself and thus impose one's personality on others for some specific or subconscious end—magical or religious, authoritative or social, sexual or personal. It may be

[1] Among other caves which were inhabited during this period are Kent's Cavern, Devon; Rain's Cave, Flintshire; and another in the same county near Rhyl.

that it arose from, and persists in, an appreciation of the beautiful and the consequent desire to possess it—which in early times meant that it must be carried about on the person or be lost irretrievably. Or, again, and more probably, its origin may be found in some subtle combination of both of these types of desire. But this is a question which, for reasons of space, cannot be discussed here. And the same reasons forbid more than a brief mention of its early practice.

As we have seen, the necklaces of pierced teeth and shells of the early cave-dwellers of the Paleolithic Age are the oldest ornaments of man yet found; but that is not to say that they were the first. The discovery of a means of boring holes through these things did not suddenly supply man with his reasons—whatever they were—for wearing them; thus, before that discovery, such things must have been worn knotted at intervals on a cord, or suspended singly as a pendant. But older, probably, even than these was the ornamental use of such brightly coloured objects as feathers, a use which has survived to this day. And though, of course, no record of them can remain, there is much reason to suppose that such adornments were worn immeasurably earlier than clothes, and were, indeed, the ultimate origin of them.

Thus, in the main, man's development was reflected in his ornaments as they progressed from purely natural objects to natural objects artificially modified; and thence, before the end of the Paleolithic Age, to manufactured objects wholly artificial in shape, such as discs of horn and carved bone pendants. In the Neolithic Age, however, we are confronted by the fact that actual evidences of this custom are almost entirely wanting in Britain, though not on the continent. This localised lack of evidence is probably due to climatic conditions unfavourable to the preservation of perishable materials; for we must remember that, except for

the stone culture, little of that period has survived either of bone or of horn implements. Still, the few beads of shale and lignite which have been found probably indicate the prevalent type of artificially made ornaments. So that, if other types have perished, and durable stone was not attractive enough to be used for this purpose, those are not reasons enough to suppose that Neolithic man in Britain greatly differed in this respect from the rest of mankind.

With the advent of bronze, man for the first time, becomes possessed of a durable material which is pleasing in colour, easily worked, and adaptable to any shape or form. Small wonder, then, if the numerous ornaments among the Bronze Age antiquities seem at first sight to suggest a practice of personal adornment hitherto unparalleled. And notwithstanding that this may be for the greater part explained by the larger population, the use of less perishable materials, and the shorter time for their decay; it is quite probable that a livelier interest in these things was stimulated by the appearance of such attractive substances as bronze, gold, amber and jet—an interest naturally expressed both in a much greater variety of ornaments than formerly, and in their more extensive use. Characteristically British are the elaborate necklaces of jet (Fig. 31); but while these are rarely found south of the Midlands, a similar one of amber was discovered in a Wiltshire barrow. But besides necklaces there were also ear-rings, finger-rings, bracelets (Fig. 32), armlets and pendants; twisted metal collars called "torcs" (Fig. 34), and crescent-shaped collars called "lunettes"; pins and slides for the hair; and for the dress, ornamented buttons, pins, dress-fasteners and studs. And these things are now made of such various materials as gold, copper, bronze, ivory, jet, amber, glass, lignite and bone.

But it is remarkable that, notwithstanding all the

craftsmanship, artistic achievement, and love of colour, form and texture manifested in these productions, the primitive perforated teeth and shell necklaces were still worn; and, what is more, worn by people who possessed ornaments of gold and bronze and amber, as was the case with that ill-fated family before mentioned. These primitive necklaces, truly, are striking examples of the continuity of human desire, linking, as they do, Paleolithic and Bronze Age man with a common

Fig. 31.—Jet necklace, Melfort, Argyllshire [$\frac{1}{4}$].

bond. But they are not more remarkable or more provocative of thought than are the gold ornaments which, found with them in that same cave, link us to the Bronze Age with a more unworthy bond. In these and certain other gold ornaments of the period, it is clear that the artificer has set himself deliberately to simulate the appearance of solid gold objects, not apparently to cheat the purchaser, but that when bought and worn these things might, by their deceptive value, obtain for their owners that reverence and respect paid to the possessors of much wealth—mental attitudes, both of possessor and reverer, not unknown at the present day.

But although the artificers of these particular ornaments are acquitted of fraudulent intention, because the armlets, being semicircular in section with the rounded side outwards (Fig. 32, *a*), appear solid only when clasped on the arm; and because the other objects, being hollow, could easily be distinguished by their light weight, yet they are at least suspect on another count. A number of rings have been found of bronze or copper covered with a thin coating of beaten gold, and because these would impose on the purchaser by their weight and solidity, it is probable that they were traded as the real thing. But however that may have been, the presence of imitation jewellery

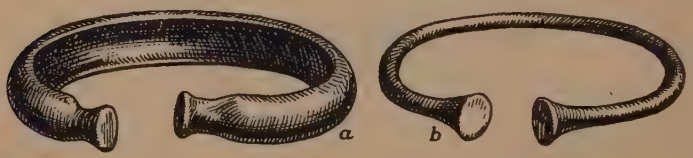

Fig. 32.—Gold bracelets: hollow (*a*), and solid (*b*).
(*a*) Heathery Burn Cave; (*b*) Beachy Head, Sussex [$\frac{2}{3}$].

at that time—some four or five hundred years before Caesar's coming—is significant of much, showing that material progress is not unaccompanied by moral dangers, for, with a widening horizon, are revealed more extensive potentialities of evil as well as of good.

In common with the ornaments of this period, the pottery and many of the bronze implements reveal a genuine artistic ability. And though the art of the Bronze Age is wholly decorative, and is practically limited to the enrichment of surfaces by geometric patterns, it is nevertheless a very perfect thing in its way. Derived from the Neolithic decoration of pottery, the chief motifs are arrangements of parallel lines,[1]

[1] See p. 159, Fig. 37.

bands, zigzags,[1] triangles[2] and concentric circles, relieved and enhanced by well-balanced plain spaces. Very early the cross appears as a decorative unit; and, later, the tentative beginnings of the spiral, which is thought to have been derived ultimately from Egypt.

But the best art of the period is seen in the simple yet entirely satisfactory decorations which, as it were, arose out of and retained the genealogy of the implement decorated; or which were suggested to the craftsman by some accidental phenomenon in the course of his work. Of the former we have already noticed in the socketed celt the ornamental retention of the wings of its parent type.[4] So, in like manner, rounded rivet-heads were perpetuated as decoration after improved casting had made rivets no longer necessary.[5] One other instance may be cited. The utilitarian loops of the spear-head, previously mentioned, were on the loss of their function retained for a time at the base of the blade, and there they became an ornamental feature as delicately beautiful as the stalk of a laurel leaf where it springs from the twig (Fig. 33). Accidental origins can surely be traced in such things as the early pottery with its decoration made by the potter's own finger or fingernail.[6] The ornamentation of the bronze bucklers likewise reveals its source; and

Fig. 33.—Looped spear-head, Thames, Teddington [¼].

[1] See p. 147, Fig. 31.
[2] See p. 158, Fig. 35; p. 159, Fig. 36; and p. 160, Fig. 38.
[3] See p. 127, Fig. 27 (*i*).
[4] See p. 127, Fig. 27 (*g*, *h*).
[5] See p. 129, Fig. 28 (*d*, *e*); and p. 141, Fig. 30 (*f*).
[6] See p. 104, Fig. 24 (*b*, *e*).

we can see how in the beating out of a bronze plate a false blow of the hammer would cause a dent, and how its corresponding boss on the other side gave the craftsman an idea which he developed into the splendid *repoussé* decoration of these things, previously noted. In these, and many other instances, we can perceive how even to the Bronze Age artist the seeing eye was given; and how in things normal and mundane to the general, he caught a glimpse of possibilities—a suggestion of beauty—his inspiration. Hence one day, when chatting with a friend about the weather, or the last bloody raid in the neighbourhood, or what not, his glance happens to fall on a leather thong with which his friend's fingers are idly playing. That is all any one else can see; but suddenly weather and raid alike lose all interest for the artist. He makes his way home, and there takes a long, dull, plain strip of metal, bronze or gold, and he twists it and twists it, and behold it scintillates with a hundred points of light; and he bends it into a collar, which we call a ribbon torc (Fig. 34).

Fig. 34.—Bronze torc, Wedmore, Somerset [⅓].

Of such moments life is made, and such moments of vision mean more for the progress of civilisation than centuries of dull routine or of intertribal strife, for salvation comes from the leaven, and not from the lump.

CHAPTER XI

Social Progress

If we are to obtain a just knowledge of this period we must likewise consider the lump as well as the leaven—the general state of society as well as particular developments within it. But here, as in all ages before written records were made, the evidence is of the scantiest. Such as it is, however, it suggests the apparent paradox that the progress of the whole was not equal to that of its component parts; proving, as it does, the continuance of that predatory warfare and internecine strife which in the Neolithic Age had ravaged the countryside from time to time. But, of course, the truth of the matter is that society as an organised whole was non-existent as yet, because the tribal villages were still the limits of man's social horizon, and, in consequence, not component parts, but more or less inimical entities.

Already we have had one lurid glimpse of family life under these conditions of existence; but that these conditions were not exceptional is shown by the numerous collections of bronze and gold articles which have been found deposited in the earth in many parts of the country. These are the "hoards" previously mentioned, and, according to their contents, they fall into one of three classes—personal, merchant's, and founder's hoards. The two last need not be further described, but the personal hoards usually comprised the treasured possessions of a family, both ornaments

and implements. All the classes, however, are alike in having been secretly buried for safety from pillage and plunder; and they have been found in such numbers as to indicate that this was the normal method of concealment resorted to in times of unrest by those who owned these precious metals. For the hoards which have been discovered are obviously only those whose owners were slain, or carried away as slaves, or did not for some other reason succeed in recovering them. They have been found buried in earthenware jars, and under large stones, but most frequently in a small hole in the soil—probably dug hurriedly at the dead of night beneath some tree which was to serve as a landmark, vanished long since.

But the most significant evidences of man's lingering barbarism are the hill-forts, although they likewise reveal his highest attainment of social organisation. The remains of ancient defence works of rampart and ditch are familiar features in many parts of the country, no less than twenty-five, for instance, being found in Dorsetshire alone. A few of them doubtlessly are of Neolithic origin, a few probably of the Early Iron Age, but the great majority of them—not counting the Roman camps, which are, as a rule, easily distinguishable—seem to have been erected during the Bronze Age.

Although the hill-forts, with one or two possible exceptions, were never permanently inhabited at this time, nevertheless they clearly continue the traditions of the hill settlements of the preceding age. We can see how when Neolithic man began to cultivate the lower and more fertile land he would naturally sooner or later make his dwelling-places there, and how the fortified hill villages would thus tend gradually to become depopulated. But during such migration, and afterwards, the strong natural and artificial defences of these places remained; and for this reason they

continued to be used on occasion both as a place of refuge and as a rallying point for the neighbourhood. So with this custom established and the same restless state of society persisting, it came about that when man in the Bronze Age settled in a new district, he chose its most impregnable situation for his stronghold, and added to its natural strength the same artificial defences of earthworks or stone walls, which were first evolved in Neolithic times.

Many of the hill-forts still testify to the unerring choice of site and the truly amazing skill with which their defences were conceived and carried out. The ancient fortress, now known as Maiden Castle, near Dorchester in Dorset, is a case in point. This immense work, rectangular in plan and measuring nearly two miles round its outer defences, occupies the eastern extremity of a long hilly ridge. It is defended on the steep south slope by four, and in some places five, separate lines of ditch and rampart; and on the less steep north by three. But these northern defences were of such stupendous size that after all the weathering and disintegration of nearly three thousand years, their cliff-like ramparts still stand some sixty feet in height above the ditches at the present day. East and west lie the entrances, narrow, tortuous and intricate, and guarded by a series of overlapping earthworks, five at the steep eastern end, and on the west, where the ground runs almost level along the crest of the ridge, by no less than eight. Finally, the space enclosed by the innermost ring of fortifications is about forty-four acres—ample room for flocks and herds, as well as for the families of the defenders.

The so-called "cliff-castles" which are found in many places on our western coasts, chiefly in Cornwall and Wales, are only another type of the hill-fort. In these cases their builders made a cunning choice of precipitous headlands more or less surrounded by the sea,

and defended them on the landward side by a series of parallel ditches and ramparts which, as at Maiden Castle and elsewhere, varied in number and size according to the nature of the approach.

The great numbers and the wide dispersion of the hill-forts, and the fact that their sites were chosen solely because of their defensibility, and generally with no regard for a water supply, together show that although warfare was always more or less imminent between the different tribes, and did indeed flame out with terrible frequency, it was chiefly of the nature of raids and soon spent. Hence, on the raising of the alarm, the people in the surrounding districts would hurriedly bury or take with them their most precious possessions, and, carrying water in skins and vessels sufficient for several days, would hasten to their city of refuge, driving their cattle before them. And, the fort once reached, if they could but withstand the first fierce onslaughts of the enemy, they were saved for the time being, simply because the complicated organisation requisite for prolonged siege operations was impossible in the then state of society. And the very prevalence of the hill-forts is ample proof that such defensive tactics were for the most part successful.

While there are not sufficient grounds to justify any detailed or dogmatic statements as to the structure, organisation, and government of society at this time, still that is no reason for shutting our eyes to what little light is derivable from the Bronze Age remains. Thus, for example, the often imposing magnitude of the earthworks just considered, as well as the considerable areas enclosed and defended by them, together indicate that social organisation had progressed far beyond the limits of the Neolithic clan, or village of kinsmen. And we may safely assume that as the population of such a village increased and, as it were, spilt over into the surrounding district, other villages grew up round the

parent community; and, further, that one and all recognised the blood-tie of kinship, and mutually co-operated at least for the purpose of warfare, defensive and offensive. Thus, not improbably before the close of the Neolithic Age, tribes had come into being, composed of a number of these related village clans, though apparently some of them had not grown powerful enough to be able to prevent their subjugation by the round-headed immigrants. In the Bronze Age, however, these huge hill-forts show what increase had taken place in the meanwhile, for it is obvious that they must have held some relation to the size of the tribes who constructed and defended them. As for tribal government, it is practically certain, having regard to the contents of many of the barrows, to the earlier and later developments of prehistoric society, and also to the general usage of modern primitive man, that the tribes were ruled by chiefs, chosen for their strength or wisdom, who retained their office until their death. There is, for instance, among other examples, the case of a fine old patriarch about six feet tall, who was buried with every mark of honour and respect when he died between seventy and eighty years of age. It is very probable, also, that the villages, or clans, within a tribal district, were each governed by a minor chief, whose authority within the confines of the village was absolute, but who, in matters affecting the tribe as a whole, acknowledged the supremacy of the tribal chief. But while it is idle to speculate further in this direction, we must consider for a moment the other extreme—the slave basis of society.

We have seen in an earlier chapter how slavery came into being as a solution of the labour problem. Now in the Bronze Age, which witnessed such immense constructions as the hill-forts, Stonehenge, and the larger of the round barrows, and also the widely

extended practice of agriculture and pasturage, it can hardly be doubted that slave labour was exploited on a considerable scale. The intertribal raids were not punitive, but predatory: and the captives—women and children, as well as men—were reduced to slavery, and became, as inevitably as their goods and cattle, the absolute property of their captors. Thus, and because children born of slaves would take the status of their parents, the slave population was continually on the increase, in spite of the higher mortality consequent on the hardships and rigour of servitude. There are phenomena in the barrows pointing to the existence of slavery. When, for example, we find in a number of instances that the central or chief burial is accompanied and surrounded by several others, one and all indubitably interred at the same time, it is impossible not to suppose that the principal burial is that of some chieftain or important person, while the others are the remains of slaves who on his death were slain that he might not go unattended in the future life.[1] This deduction is further strengthened by another case of simultaneous interments where the place of honour was occupied by a little child barely two years old, probably the only child of some great chieftain; for this tiny body was laid unburnt in a stone cist, while round it were ranged no less than six urns containing the cremated remains of as many attendants. And as inhumation and cremation were practised contemporaneously throughout a great part of this period, the employment of both methods in this instance may be taken to be a local expression of the difference in the social status of the dead—a local expression only, for in other places the reverse procedure has been found.

It is curious that much of our knowledge of man's life in the Bronze Age should be obtained from the paraphernalia of his tombs. But so it is that, prompted

[1] Similar phenomena are also found in some Neolithic barrows.

by religion and superstition, by public respect and individual love, he buried his dead with such ceremonies and customs as have left to this day records whose importance to a survey like this cannot be over-estimated.

The circular grave-mounds, or round barrows, which, as we have seen, were first erected by the round-headed immigrants at the close of the Neolithic Age, became the characteristic sepulchres during the greater part of the Bronze Age. Some thousands of them are still standing, many singly, many more in groups, in various parts of the country, but chiefly in those places where centuries of agriculture have not intervened to level them with the earth. The Wiltshire and Dorset Downs, the Yorkshire Wolds, and Derbyshire, are especially rich in them; while other mounds, which are generally called cairns because they are made of stones instead of soil, abound in Cornwall, Wales, and Scotland. Although conforming to the new shape, some of the round barrows show signs of Neolithic tradition, being contained within, or containing, circles of standing stones, or being surrounded by a ditch, as in the previous period. But, speaking generally, the round barrows are merely mounds of earth, chalk, or stones, which have been heaped over single and central burials. In shape they commonly resemble either a low cone or an inverted shallow bowl, and in size may measure, at the present day, anything from twenty to one hundred and fifty feet in diameter, and from one foot to twenty-four feet in height. In perhaps the majority of barrows, however, subsequent to the date of their erection, other interments were made from time to time, apparently at haphazard, at any level, and in any part of them, save that the north side was generally avoided.

From the barrows we learn, also, that inhumation of the dead was the general usage at the beginning of

this period; and, further, that cremation, which, as we know, was practised to a certain extent in the Neolithic Age, gradually became more and more common as the centuries passed, until, in the last third of the Bronze Age, it was practically universal. Then it was that the barrows began to be less frequently erected; and, although the custom lingered on here and there into the following period, burial in urnfields, or cemeteries, became the general habit.

The objects most frequently found in association with the burials of this period are vessels of pottery, the greater number of which seem to have been made expressly for funereal purposes. All pottery at this time was still moulded by the hand alone, as in the former age; but while domestic pottery was frequently left plain, the sepulchral pottery was almost always ornamented, often very elaborately. According to their several functions, these vessels fall into four distinct and successive classes, which, though overlapping to a certain extent, are nevertheless indicative of the gradual change from inhumation to cremation. First, then, come the beakers, or drinking cups (Fig. 35), which appear to have been introduced into Britain during the closing years of the Neolithic Age. These vessels have already been described in a former chapter with other domestic pottery; but their use was, in fact, twofold—sepulchral as well as domestic.[1] And, except for a few isolated occurrences in the long barrows, they are in their

Fig. 35.—Beaker, from a round barrow at Goodmanham, Yorks [¼].

[1] Cf. domestic beaker, p. 71, Fig. 18.

sepulchral character confined to the earliest round barrows, and are usually associated with unburnt burials. Next appear the food-vessels (Fig. 36), which have wide mouths and narrow bases, and are often bowl-like in shape. This class, evidently derived from the Neolithic bowls,[1] and, like them, peculiar to these islands, is found almost as frequently with burnt as with unburnt burials. Both beaker and food-vessel were alike, however, in being used to contain food provided for the dead. From the food-vessels in turn were evolved the cinerary urns which form the third class. They began to appear about midway through the period covered by the food-vessels, and, gradually superseding them as the practice of cremation continued to spread, were customarily used to hold the burnt ashes of the dead throughout the latter part of the Bronze Age. They are, as a rule, the largest of all sepulchral vessels, measuring at times as much as three feet in height; and their prevailing shape is that of two truncated cones placed base to base (Fig. 37), though a simple flower-pot shape is not

Fig. 36.—Food-vessel, Goodmanham, Yorks [¼].

Fig. 37.—Cinerary urn, Cold Kirby, Yorks [⅛].

[1] See p. 70, Fig. 17.

uncommon. The fourth class, found as a rule with the urns, comprises tiny vessels of various shapes, generally richly decorated; and because they are often pierced with holes they are provisionally called "incense cups" (Fig. 38), but as a matter of fact their use is unknown. Such, briefly, are the divisions of the Bronze Age sepulchral pottery; but it should be borne in mind that, being hand-made, these vessels have an infinite variety of shape and ornament, no two in any class being exactly alike.

Fig. 38.—"Incense cup," Aldbourne, Wilts [½].

But in all the phenomena appertaining to the barrows and cemeteries of this period—in the treatment of the corpse and the disposition of the body or the ashes, in the sepulchral pottery, the accompanying grave goods and the provision of food, or the lack of either or all, and in the funeral feasts at the interment—the variations were such that even a bare enumeration is not possible in this place. Yet, as the burial customs differed not only from district to district, but in the same neighbourhood—even in the same barrow or cemetery—it would seem, judging from the evidence we have, that in no other phase of Bronze Age life were individual tastes so abundantly expressed. We have already discussed what progress man had made by this time in social organisation. Now here, if anywhere, we can see that parallel development of man as an individual, with thoughts, feelings and desires personal and often peculiar to himself. And we can appreciate to what extent he

has now freed himself, by a long-continued and more or less conscious exercise of his private will, from the ancient tyranny of the pack. Social organisation evolved solely along the lines of the pack instinct would never have raised man above the brute, for in the case of ants and bees, it is apparent how it has been perfected to the annihilation of all individual sense. On the other hand, all the discoveries and inventions of humanity up to this point, and beyond it, were personal adventures achieved in the face of the prevailing uniformity—were the steps of man's ascent hewn by the individual, and afterwards followed by the crowd. And although mankind can only benefit by such innovations according to the degree of its social organisation, the utmost organisation itself can do is to foster and encourage personal effort. And once the exercise of individual thought about material things is encouraged—tolerated, even—from that point to the expression of the feelings and desires of the individual heart is a step as short as it is natural. Hence, although the diverse evidences of the burial customs of the Bronze Age are confused and often apparently conflicting, a broad survey of them makes it clear that after all they are for the most part merely the results of individual testimonies of the two great religious ideas of a future life, and of the existence of a divine being or beings—ideas which had been handed down from the preceding age.

For Bronze Age man, as for Neolithic man, the inexorable fact of death lost something of its sting in the belief of a life beyond this, and not materially different from it. The frequent provision of food placed just in front of the face of the dead, and of grave goods comprising implements and weapons, ornaments and clothes, points to this; as also do the many instances of multiple burials. We have already seen something of the custom last mentioned, but there are

other cases where husband and wife have been buried together at the same time; and whether this indicates a prehistoric practice of suttee, or whether the wife was sacrificed on the death of her husband, the underlying idea is the continuance of the marriage state beyond the grave. Especially so would this seem in those cases where the bodies have been found face to face and touching each other in an attitude of affectionate embrace. Children, too, have been found with their parents, either and both; and we can at least understand the thought—born of a sure faith in the future life—that on the death of their natural guardians, it seemed better that the children should accompany those who, yonder as here, could best care for them. And the position in which a tiny child was often placed—just at the mother's back—would seem to show that she was to carry it with her on that last journey slung at her back in a net in the then normal way, probably much as the Papuan women carry their children at the present time. The uglier explanation of such interments, which would lower the social status of women and children at that time to that of slaves or cattle, is discounted by the fact that barrows were frequently erected in honour of individual women, and, as we have seen, of children also. Lastly, it was a common practice to slay an animal—usually a horse, ox, or pig—and bury it with its owner, that it might, in this way or that, be of service to him in the hereafter.

There is likewise much evidence to prove that religion exercised a profound influence on the life of Bronze Age man, as well as on his ideas of death. Stonehenge, perhaps the most impressive of all the works of prehistoric times, moves us to-day not only by its grey antiquity, by the extraordinary engineering skill shown in its construction, and by its simple yet supreme artistic achievement, but also because it witnesses to this religious impulse in man. Familiar

as Stonehenge is to all, at least by hearsay, a brief description of it will suffice. Surrounded by a ditch and bank, stood originally a circle of immense upright monoliths, each supporting the ends of two horizontal stone imposts, or lintels, which, touching, thus formed a continuous architrave throughout the whole circle—monolith and lintel being tenoned and socketed for greater strength. Within this circle stood another of smaller stones without lintels, which in turn enclosed five enormous trilithons. These structures, each composed of three stones like the frame of a vast door were ranged in plan in the form of a horse-shoe; this shape being repeated by smaller single stones standing just within them. And in front of the middle and mightiest trilithon, which measured no less than twenty-one feet from the ground to the underside of the capstone, lay a recumbent block now known as the altar stone. The approach, which was diametrically opposite the greatest trilithon with the altar at its foot, lay between raised banks, and is called the avenue; and on it at some distance stands a huge and lonely pillar usually known as the Friar's Heel. Such was Stonehenge; and to-day, in all the welter of standing and fallen stones, this plan can still be traced. All the stones were shaped and worked with stone implements—axes, mauls, and hammers—many of which have been found on the spot. And modern excavation and research have made it practically certain that it was erected in the Bronze Age, and probably as early as 1700 B.C., before bronze had come into common use.

But while there is a fairly general agreement as to the date of Stonehenge, it is otherwise with regard to the specific purposes for which it was erected. Some, seeing that the axis of the circle and avenue points to the north-east, and thus approximately to the position where the sun is seen rising above the horizon on Midsummer Day, claim that it was planned with

that idea in view; and hence that it was a solar temple, thronged on the eve of that great day of the year with awe-stricken worshippers who watched through darkness and dawn to acclaim and greet with sacrifice and praise the uprising of their God. Others, again, point to the fact that the principal part of Stonehenge lay south-west in the horse-shoe "choir" of the great trilithons, and so was—as in most temples—opposite to the entrance, in this case the avenue. Thus, if the former hypothesis is correct, the worshippers must have turned their backs either on the rising sun or on the holy and ceremonial part of the temple. And another view is put forward. If the direction of the axis points north-east, so also it points south-west; that is, towards the *setting* of the sun on the shortest day. And from certain similarities of plan and construction between Stonehenge and the chambered barrows, the supporters of this view see an analogy between them, and claim that Stonehenge is the sublimation of the barrow idea, built to commemorate the annual death of the Sun God, or of the Earth Mother, the Goddess of Fertility, or possibly some transfusion of the two divinities. Hence the principal religious ceremonies would take place at midwinter, and be of the nature of mourning and humiliation; to be followed at some subsequent date by a festival of rejoicing, feasts and bonfires, in celebration of the rebirth or resurrection of the Divine Power.

But, after all, the fact is we do not know whether this stupendous erection was temple, or sepulchre, or both; we cannot even be sure, in spite of all the probabilities, that it was connected with sun-worship at all. All we know is that it testifies to the eternal need of man for something outside and beyond this mundane life; that it is positive evidence of a spiritual bond binding us to our ancient forefathers, than which our

blood-bond is not more sure; and that, for this reason or that, the ground whereon it stood was holy ground, for hundreds of barrows are clustered in its near neighbourhood, two indeed so close as to lie within the very shadow of its sacred stones.

As regards the evidence for sun-worship, we need here note only that unburnt bodies were, as a rule, placed so that their faces looked towards the sun at the moment of interment; that the secondary burials, almost without exception, were made on the sunny sides of the barrows; that votive offerings of gold and bronze sun-discs have been found; and that sun symbols—concentric rings and cup-shaped hollows—frequently appear engraved on the covering stones of cists and urns, proving by their very position their sacred import.

Such a religion seems to us, of course, utterly remote from our modern philosophy of life; but, in more ways than we realise, the selfsame thoughts and feelings of these ancestors of ours remain knit into the mental fibre of the race, and by subconsciously prompting or biasing our minds reveal themselves in our actions at the present day. They may have changed for us in significance, as, for instance, in the orientation of our churches, which still directs the worshipper's gaze eastwards to the rising sun and not towards Bethlehem or Jerusalem, which are definitely south-east from this country; and, again, in our Christmas festivities, in our bonfires and yule-logs, which may be traced to the rejoicings connected with the return of the sun after the shortest day. But there are other survivals which persist untransformed by modern religious beliefs. The widespread prejudice against burial on the north, or dark, side of our churchyards—an idea which now has neither a religious nor even a rational meaning—really perpetuates Bronze Age man's abhorrence and avoidance of the north side of the barrows

away from the sun. And, further, the idea of burial in consecrated ground—again, not an integral part of Christian belief—can be seen in process of development in prehistoric times, and especially so during the Bronze Age. Stonehenge and its neighbouring three hundred barrows are not a chance juxtaposition; and, indeed, there is much reason to suppose that many of the bodies interred there were brought often from great distances to be buried in that hallowed ground. Grouped barrows and cemeteries tell the same tale; and the numerous secondary burials in the barrows themselves, though in some cases they may have been relations of those for whom the mounds were first erected, are more probably due to the belief that the barrows were holy ground such as would ensure certain benefits to the dead, whose remains could be laid therein. Even the cruder belief, which led to the slaughter and burial of an animal with the dead, was found in these islands as recently as the latter half of the Nineteenth Century; for the case is on record of an Ulster farmer's widow who, when remonstrated with for killing his horse, said as though to clinch the matter: "Would you have my man go about on foot in the next world?"

It must not, however, be supposed that the great religious ideas of this period had power utterly to free man from his darker inheritance of superstition and magic. The woods, streams and mountains were still for him, as for his forefathers, the abodes of spirits more or less malign, whose power and influence, though local in effect, were, of course, in direct proportion to his belief in them. Superstition was rife throughout prehistoric times, and it is probable that many objects whose significance cannot now be fathomed, and many others which are called ornaments, were really charms and amulets possessing magic properties of protection against both the "terror by night" and "the arrow

that flieth by day." And these superstitions, too, many of them, have dogged man's footsteps down through the ages; and, on occasion, have power to move perhaps the majority of us at the present day. The most outrageous forms of animism and magic have disappeared, it is true, but our vaunted civilisation in this respect seems only skin-deep when, in spite of Christianity and science, of education and reason, most of us can call to mind numerous instances of their presence in our midst—as, for example, the widespread belief in mascots and charms; the common avoidance, more especially at night-time, of churchyards and of places reputed to be haunted; and the antics seriously performed as incantations or exorcisms to avert the ill luck consequent on this or that trivial accident or incident of everyday life.

Other survivals in our midst—religious, economic and social—from these early ages of man's development are discussed elsewhere in this book; and we need not here multiply instances of this particular class, abundant and widespread though they are. Their chief significance for us, as the researches of folk-lorists and modern psychologists alike testify, lies in the fact that the real living power of these inherited prejudices and superstitions proves yet once again that we are veritably the children of these forefathers of ours, in the functioning of our minds as surely as in bone and flesh and blood.

But not only in physique and thought, in speech, also, the vehicle of thought, or—if most of us still think in pictures—the means by which thought is transmitted, the Bronze Age has persistently influenced the mind of the race. A new language was introduced into this country by the coming of certain Keltic-speaking peoples, probably about the Eighth Century B.C. But because this invasion was only the first of a series which stretched over a period of some six hundred years, because the problems and phenomena connected

with them all are inextricably involved and must be considered together, and because the first-comers seem to have left little, if any, trace on the material culture of this period, all discussion of them must be postponed until the following chapter. Here, however, and in conclusion, it should be noted that the speech of the earliest of these invaders, who are now called Goidels, became the speech of this country in the late Bronze Age, and that, in wide areas of the British Isles, it is still a living language at the present day.

PART IV

CIVILISATION IN THE EARLY IRON AGE

CHAPTER XII

Invasion and Transition

THE period lying between the close of the Bronze Age in Britain and the Roman occupation is severally called the Early Iron Age, the Late Keltic Period, and the Early British Period. But as the previous stages of man's development are named after the most characteristic material of which his implements were made, we may as well be consistent with regard to this period which, counting the Eolithic, is the fifth and last division of our prehistoric civilisation. It is true, of course, that we may be said to be living in the Iron Age still, so universally is that metal employed in our everyday life; but since its first general use other achievements of human genius, not to mention historical documents, provide means for classifying more adequately the subsequent stages of man's social and economic development.

Throughout the Early Iron Age, then, the population of Britain, as was intimated at the close of the preceding chapter, continued in that state of flux and fusion, of which the late Bronze Age witnessed the beginning. But any attempt to elucidate the distribution of languages and, what to a certain extent is the same problem, of racial characteristics in Britain at any time during this period is met by many difficulties —difficulties about which archæologists, philologists, and ethnologists, each working along their own particular lines of research, differ not only from each other, but even among themselves.

Briefly, the problem is as follows. It is agreed that the speech of Neolithic man in Britain and western Europe had no affinities whatever with the Indo-European, or Aryan, stock, from which all the great modern European languages have been evolved—that it was, in fact, pre-Aryan. Further, it is agreed that for some time previous to the invasion of Julius Caesar two distinct dialects of Keltic—an Indo-European language—were here or there spoken in these islands; and, lastly, that this linguistic change was the result of an invasion, or invasions, of Keltic-speaking tribes from Gaul.

This change of speech has been frequently, but wrongly, ascribed to the invasion of the "round-heads" of the late Neolithic and early Bronze Ages. Wrongly, because the first appearance of a Keltic-speaking people in western Europe did not occur until many centuries later. The cause must be looked for elsewhere.

While it would be idle to pretend that any entirely satisfactory solution of this problem has yet been reached, it seems, on the whole, most probable that the older of these Keltic dialects, which to-day comprises Gaelic, Manx, and Irish, was introduced from Gaul by invading tribes of Goidels, in the latter part of the Bronze Age, about 800–700 B.C. But though it is certain that they had reached Ireland and had settled there before the close of that period, all that can be said with any degree of assurance with regard to Britain, is that their coming seems to have been comparatively peaceful, and more of the nature of a slow infiltration than of a sudden invasion. For while there is no evidence of any abrupt or radical change of culture such as might be expected, it is possible that their presence here is indicated by the gradual substitution of urnfields for barrows in the contemporary burial customs; and also by objects of continental origin, for whose frequent appearance among our late Bronze Age antiquities trade may not have been wholly

accountable. The Goidels are thought to have settled down and intermarried with the descendants of the old Neolithic and "round-head" population; and thus Goidelic in the course of time came to supersede the archaic pre-Aryan speech of the country.

The later Keltic dialect, still spoken in Wales, was introduced by a subsequent invasion which probably began about 400 B.C. These people, known as the Brythons, also came from Gaul; and it is from them that Britain takes its name. They appear to have subjugated the country district by district, for they came in successive hordes, each with its own tribal name, and each landing at different times and places on the south and east coasts, and radiating thence across the country. And thus, but only in the conquered districts, they imposed their own speech on the inextricably mingled descendants of the Goidels, "round-heads," and Neolithic aborigines, who at this time were speaking Goidelic. It is probable, however, that a certain percentage of the old inhabitants retreated to the west, north-west and north, before the advance of their enemies. This piecemeal conquest of Britain took very many years to consummate, and seems still to have been proceeding in the north and west when, about 200 B.C., this country was again invaded in the south-east.

The new-comers were tribes of the Belgae, the most war-like people in Gaul. Caesar,[1] writing of them some hundred and fifty years later, says that they had crossed over from Belgium, had conquered with the sword the coastal regions of Britain (presumably the south and south-east), and had settled down to the cultivation of the soil. They were apparently a mixed race of Brythonic-speaking tribes with a strong Teutonic infusion; and the numerous objects of their distinctive culture which have been discovered, prove

[1] Caesar: *De Bello Gallico*, V, 12, § 2.

them to have occupied only the country lying south of the Thames and its estuary. In this district, then, the Brythons in turn were partly subjugated and partly forced to retreat, and their recoil from the Belgae would have helped to press back the boundary-line of the older Goidelic-speaking peoples yet further from the south-east.

This movement of linguistic and, probably, racial domination was continued later during the Roman occupation; and, later still, was completed by the recurrent invasions of the Angles, Saxons and Danes. Thus, taking the south-east coasts as the centre of pressure and dispersion, we find that the older Goidelic dialects, which have been thrust furthest away from it, are now spoken in Ireland, the Isle of Man, and the west and north of Scotland; that the later Brythonic occupies, as it were, an inner arc, being the speech of Wales at the present day, and, until the close of the Eighteenth Century, of Cornwall, while traces of it are to be found in Cumberland, where the shepherds still count their sheep in Welsh; and, finally, that the latest comer of all, our own language, is now everywhere spoken in England and the Scottish lowlands.

In the Early Iron Age, however, it is at least possible that the old pre-Aryan language was still spoken in remote and outlying parts of Britain, where the Keltic influence had not yet reached. This ancient speech has often in the past been called Pictish, but erroneously. The Picts of history were not a separate race, but an amalgam of Keltic-speaking tribes and the older inhabitants in the north of Scotland. There, as elsewhere, the Keltic language eventually displaced and superseded the more primitive form of speech, although it is probable that the older elements of the population predominated as nowhere else in the country.[1]

[1] Rice Holmes, *Ancient Britain*, 1907, pp. 409-24.

Lastly, as regards the physical characteristics of these Keltic-speaking invaders of Britain, it is certain that they were a mixed race before they reached this country, having intermarried with the descendants of the Neolithic and "round-head" stocks on the continent, and, in the case of the Belgae, having also a Teutonic admixture. Nevertheless, their prevailing type seems more or less to have approached that of the Kelts who first invaded Gaul. And these were a tall and fair, or red-haired, people with long-shaped rather than round skulls.

So much, at least, is necessary for the right understanding of the social and economic phenomena of the Early Iron Age in Britain; for only with this knowledge is it possible to trace the origins and growth of the new influences, the further development of the old traditions, and the interaction between them both, which together brought about the remarkable progress shown in the civilisation of this period.

The Early Iron Age is generally said to have commenced with the coming of the Brythons, about 400 B.C. There are grounds, however, for thinking that the last two hundred years of the Bronze Age, approximately, were really of the nature of a transitional period, during which iron was gradually becoming known to the users of bronze in this country—at first, probably, by means of foreign trade.

There is abundant proof of such a transition on the continent, where the Early Iron Age is now recognised as comprising two distinct stages of development. These stages have been given site-names after the important discoveries which have been made at Hallstatt, in the Austrian Tyrol, and at La Tène, in Switzerland. The Hallstatt period includes the transition from bronze to iron, which lasted for several centuries; while the La Tène period may be said roughly to correspond to our Early Iron Age.

As regards the transition in Britain, much research remains still to be done. Nevertheless, what has already been achieved establishes it as a fact which must be reckoned with, for a number of objects, bearing the unmistakable stamp of the Hallstatt influence, have been found in this country, among which we need pause only to note bronze buckets and cauldrons, and the leaf-shaped bronze swords previously mentioned, not forgetting the well-known sword from the Thames, with its iron blade and its bronze hilt terminating in curious antennae-like forms (Fig. 39). But before we consider what probably were the first essays of British smithcraft, something should be known of the inception and early practice of iron-working.

Fig. 39.—Sword of Hallstatt type, Thames [1/7].

In a previous chapter we have seen that the ores of copper are comparatively rare among the mineral deposits of the world, and tin especially so; and, further, that the fusion of these two metals in the manufacture of bronze, and the subsequent casting of bronze objects, are both complicated processes requiring considerable metallurgical knowledge. On the other hand, iron ores are abundantly and widely distributed; and their reduction to pure metal needs little skill, and is comparatively a simple process well within the capacity of a Neolithic craftsman. Hence it is not surprising that many people maintain that the use of iron must have preceded that of bronze in man's civilisation. Such a sequence, on the face of it, is not impossible; and, certainly, it would seem to fit in better with man's

normal development from the simple to the complex. But we have to face all the facts that confront us, and the vast majority of these are irreconcilable with this hypothesis.

It is certain, for instance, that the implements of the earliest iron culture show no trace whatever of Neolithic tradition, which, for reasons previously noted, must have been the case if iron had been the first metal used by man. On the other hand, as we have already seen, there is indisputable evidence of a Neolithic—Bronze transition. And, further, when we find that the earliest use of iron in Europe was to decorate, by means of inlay, such things as bronze bracelets and the handles of bronze swords, we cannot escape the conclusion that it was esteemed a valuable and rare metal at a time when bronze was already in general employment. And when, subsequently, iron became common enough for implements to be made of it, and we see that these early iron objects servilely copied late bronze forms—just as the early copper and bronze implements had imitated late stone forms—the more recent advent of iron as a factor in man's civilisation becomes as nearly as possible an absolute certainty.

It is also interesting in this connection to note that the ancient Greek traditions, as set down by Hesiod, Lucretius and Aeschylus, for instance, speak with no uncertain voice of the priority of bronze over iron; while in the poems of Homer, the earliest of them all, iron is but rarely mentioned, and we seem to be actually living in the Bronze Age. It is noteworthy, too, that even folk-lore, as we shall presently see, points to the same conclusion.

But while there is no doubt as to the order in which these two metals came into general use, it is quite possible that iron was actually known to man, here or there, as early as, if not earlier than, bronze or copper. The frequent occurrence of the pure metal in meteoric

form, which, by-the-bye, was used by the Eskimo of Greenland within living memory, and most probably on their own initiative; the widespread distribution of the various iron ores, and the ease with which many of them can be reduced in an ordinary hearth-fire without special apparatus, together suggest that its discovery may indeed have preceded that of copper, and, not improbably, in much the same accidental manner as we have already pictured.

But untempered iron is softer than bronze, and therefore actually inferior to it for the manufacture of the cutting and piercing implements which, as we have seen, had been tool-making man's unresting pursuit throughout the ages. And this reason alone would, it seems, be sufficient to explain the continued supremacy of bronze even when iron was known. But in the course of time, it happened that some man, while handling or hammering a piece of red-hot iron, was suddenly startled or burnt, and by sheer accident dropped the heated metal into some chance-placed vessel of cold water; or, again, the hot iron may have been intentionally quenched in water for reasons of haste, or to avoid the risk of leaving pieces of the hot metal lying about. And so came the surprising discovery that the nature of the iron had somehow been changed thereby—that it had become extremely hard. And it was that selfsame moment, and not that of the mere discovery of iron, which witnessed the real birth of the Iron Age for man, and the passing for ever of the Age of Bronze.

A historical instance of the uselessness of untempered iron weapons is supplied in Polybius' account of the battle of the Addua between the Insubrian Gauls and the Romans in 223 B.C. He records that the Gallic tribes were armed with long swords which bent with each blow given by them, and then before they could be again used had to be straightened out by the foot

against the ground. The Romans, knowing this, acted accordingly; and, receiving the first blows on their spears, closed with the Gauls before they had time to make their weapons again effective, and by means of these tactics won the battle.

As with bronze, so with iron—neither the place nor the date of its first use by man can at this time be determined. But as small iron beads have been found in a predynastic grave in Egypt probably as early as 4500 B.C., that country may well be the original scene of its discovery and the place from which this knowledge sooner or later spread to other lands. Yet, on the other hand, it is quite possible that it was discovered independently—if subsequently—elsewhere. As regards Europe, however, since Hallstatt is the only place where the slow continuous transition from bronze to iron, beginning approximately 1000 B.C., can be traced throughout; and since that place is not far from the sites of two of the earliest ironworks on the continent, it is thought by some to have been the source whence all Europe derived this new culture; and accepted by most as the centre of its dispersion, at any rate, for the adjacent countries and, ultimately, Britain.

As we have seen, objects of Hallstatt type, if not origin, found their way into Britain long before the Brythonic invasion; and it was doubtless due to these things that British craftsmen first began to turn their attention to this new metal. Few implements, however, which can be recognised as early native work have as yet come to light; but amongst them are celts or axes which slavishly copy the looped and socketed celt of the late Bronze Age. And because iron was nowhere ever smelted and cast before the Middle Ages, but was only heated in the fire and by hammering wrought into its final form, these laborious imitations of distinctive cast-metal shapes have an importance for us which can scarcely be overrated. They reveal yet once again that

instinctive conservative attitude of man which even when confronted with a strange medium compels him to think in known and proved types. They show, too, the quite wonderful skill of the craftsman, yet, at the same time, no appreciation whatever of the real nature of this new metal, familiarity with which would have enabled him to obtain better results with far less actual labour. And they also imply that at the time of their manufacture no new peoples had yet arrived—at least, in those districts where these things had been fashioned.

But if the influences of this new culture had begun to be felt in Britain before ever the Brythons had set foot upon its shores, it seems, nevertheless, to have been their coming which so greatly quickened the change from bronze to iron—so much so, indeed, as to have given rise to the common supposition that the Iron Age was imposed upon Britain at the point of the sword. Hence the picture which has so often been drawn, of these people in countless hordes descending suddenly upon the coast, completely armed with weapons of iron, confident in its superiority to bronze, and accustomed to its use in their everyday life. That they came is certain, but little else is: neither the manner of their coming, for instance, nor yet the degree of their familiarity with iron when they first set foot upon these shores. We cannot even be absolutely sure, as was earlier intimated, that their arrival coincided in time with the rapidly extending use of iron in this country, although this is now provisionally accepted by most scholars.

But while the exact contributions made to the general culture by each successive invasion in prehistoric times cannot always be determined, it is possible to trace by means of the antiquities themselves the continued growth and spread of this or that new influence which made for the progress of mankind.

Such, and not least among them, is the case with iron. And during these two or three centuries of transition, while all the other aspects of the social and economic life of Britain seem to have persisted along the lines of Bronze Age development, we can perceive—if as yet but dimly—this new culture slowly but surely preparing the way for the civilisation of the Early Iron Age.

CHAPTER XIII

Economic Expansion

THE successive and prolonged invasions of Britain, previously considered, and the multiplying generations of the older inhabitants, brought about a great numerical increase of the population in the Early Iron Age; so much so, indeed, that when Caesar came he remarked on the "endless number of inhabitants" of this country.[1] And even if we had not his testimony, ample proof of this increase is provided from other sources. Thus, bearing in mind our earlier discussion, of the relations between population and food supply, we should be prepared to find evidences of a corresponding increase in agriculture and pasturage during this period. And these evidences abound, both material and historical, for now, as regards this country, we are standing on the threshold of history.

Caesar, as we have seen, plainly says that the Belgae, who had invaded south-east Britain probably a hundred and fifty years before him, had settled down to the cultivation of the soil. But long before either Caesar or the Belgae came, this country had been visited by a traveller who had made report of what he saw here. This was the geographer Pytheas, a native of Massilia—now Marseilles—who, impelled by as great and adventurous a spirit as later moved Columbus himself, set out from his native place about 330 B.C. on a voyage of discovery into the unknown northern seas.

[1] *B.G.*, V, 12, § 3.

He landed in Kent, amongst other places, and there he was struck by the abundant wheat harvests which he saw. He remarked unfavourably on our then climate, which, because of the forests still occupying vast tracts of land, was even more rainy and less sunny than at the present day. And for this reason, he said, the corn was threshed in great barns, and not in the open, as in more favoured lands. He noted, too, that the corn was not only used as food, but also for making beer or mead, which possibly shows that grain was already being produced in excess of the actual food requirements. But if not at that time, later it was, for Strabo, writing some thirty years before the Roman conquest of Britain, includes corn in a list of British exports. While further historical proof of extensive cultivation is to be seen in Caesar's narrative, where we can read that on the first invasion, his army, numbering from ten to twelve thousand men, was fed for a fortnight or longer on the corn which he caused to be cut in the fields round about the landing place; and again, that, in the following year, he demanded and quickly obtained from the people of Essex sufficient grain to provision an army three or four times the size of his previous one.[1]

If, on the other hand, it is urged that he also said that "those in the interior, for the most part, do not sow corn but live on milk and flesh, and are clad in skins,"[2] we must remember that, as he did not penetrate into those parts, this, like other of his statements concerning Britain, presently to be considered, was made without any personal observation of the facts. Indeed, we know now from actual discoveries that in the eastern and western counties of England, in the Midlands, and in Yorkshire, corn was grown and linen and woollen

[1] *B.G.*, IV, 30–32; V, 20, § 4. *See also* Rice Holmes, *Ancient Britain*, p. 253.
[2] *B.G.*, V, 14, § 2.

clothes were worn as in the Bronze Age. One example from "the interior" will suffice here. At Hunsbury, near Northampton, excavations which have been made on the site of a fortified town of this period, have proved that four different kinds of corn were grown there and stored in pits; and have brought to light stone querns in such numbers as to justify us in believing that every hut was provided with its own corn-mill; the evidences of spinning and the weaving of cloth being likewise abundant. But although this is a typical instance of what has been found in many other places, still there is an element of truth in Caesar's remark: for south-east Britain, by reason of its nearness to the continent, was, in fact, more highly civilised and widely cultivated than the rest of the country, while in the remote and mountainous districts of the west and north agriculture was very little practised at this time. Hence it would seem probable that Caesar obtained this information from some of his Belgic hostages who decried the civilisation of the older inhabitants in the interior to enhance by contrast their own superior culture in the eyes of the great Roman.

Corn, however, was not the only produce of agriculture at this time. For, besides wheat and barley of different kinds, and rye, there have been found evidences of abundant harvests of broad beans and peas in several places in Somerset. And this cannot have been a purely local development; the seeds must first have been imported from the continent, so that it is practically certain that the cultivation and use of these foods spread from Kent across the country. And in this place it may also be mentioned that fruits and nuts, zealously gathered in their season, made a much appreciated addition to man's vegetable foods, judging from the discoveries on the sites of his dwelling-places. For instance, as much as two barrow-

loads of sloe stones were found in one spot, while there and elsewhere large quantities of hazel shells, and numerous seeds of blackberries, dewberries, and elderberries tell the same tale.

Pasturage was likewise on the increase. Caesar himself saw many of the grazing grounds, and remarked on the "large quantity of cattle" therein;[1] and, later, Strabo reported that cattle and hides were both being exported from this country. Meat, of course, still entered largely into the diet throughout this period, although, owing to the increasing practice of agriculture, not to such a degree as formerly. But it is curious that the favourite flesh-foods differed in different districts: in one place—mutton, in another—beef, and in yet a third—pork, being consumed most frequently. And this cannot be wholly accounted for by the fact that the local grazing grounds would better suit one or another class of animals, because the bones found in most settlements show that all three were available in the same place, and were eaten to a greater or lesser extent, and, in many districts, goat-flesh and horse-flesh as well. Further, because the practice of salting meat was known at this time in Gaul, it is more than likely that the old problem of feeding the cattle in winter was in part solved by an autumnal thinning of the flocks and herds, and the storing of salted meat for consumption during the cold season. And, lastly, just in the same way that man was still making additions to his vegetable foods from purely natural sources, so we still find him, from time to time as opportunity offered, supplementing his larder with fish and the flesh of wild animals and birds, some of them now extinct in this country. Among the refuse of his meals have been found the remains of the crested pelican and the common crane, wild swan and goose, and many species of wild duck; red-deer and

[1] *B.G.*, V, 12, § 3.

roe-deer, wild boar, beaver and otter; fresh-water fish and oysters—to name only the most striking. But the value of such food was now dietetic rather than economic: for while it added a pleasing and beneficial variety to the meals, its occurrence was not frequent enough for it to be regarded as a serious contribution to the food supply of the average household.

From the foregoing, then, it is obvious that the Early Iron Age saw the final stage in that gradual but profound transformation of man, which we have been tracing since the dawn of the Neolithic Age. Man is a hunter no longer, but a farmer. And thus, with the farms increasing in size and number, not only in the uplands but now in the lowlands also; with the general employment of horses and oxen for timber-hauling, ploughing, and the drawing of sledges and wheeled wagons; and with the appearance of even the familiar barn-door fowl and geese in the farmyards, and of beehives near the doors of the huts, the rural life of England during this period takes on an aspect of which only the unessentials—such as the material background of domestic and farm buildings—have changed during the two thousand years which have since elapsed.

The numerous agricultural implements and tools of this period which have been found (Fig. 40), also bear out the evidence above quoted, comprising as they do the billhooks (*a*) and axes (*b*) used in clearing the forests, as well as the ploughshares (*c*), hoes (*d*), and sickles (*e*) used to prepare the soil and harvest its produce. These things show, too, how iron had at this time superseded bronze in most districts, at least for the purposes of agriculture. But valuable though they are as evidences of man's progress, these agricultural implements are far from being the most significant of the remains of the Early Iron Age; for, after all, they are but the old things in a new guise.

Again and again in the course of this survey it has been shown how it was man's dire need which compelled him ceaselessly to experiment in this or that direction, and to take the utmost possible advantage of any accidental discovery. Further, it has been apparent that these discoveries in turn created new desires which again demanded new efforts to gratify, with the result that step by step civilisation grew ever more complex, and man's economic relations with his fellows more involved. Thus, if we have read aright the lessons of his earlier progress, we cannot be surprised that, with the appearance and general use of iron, man developed needs entirely absent or, at most, unrealised before. What at first sight is surprising, however, is their variety—not to say modernness. For there have been found such diverse iron objects as keys or latch-lifters, anchors, firedogs, tub or barrel hoops, chains, money, wheel-tires, bolts and nails; while mirrors, brooches, helmets and horse-trappings of bronze, pottery plates and dishes, and a wooden ladder, may also be noted among the many startling phenomena of this period. And if certain of these things were doubtlessly due to the

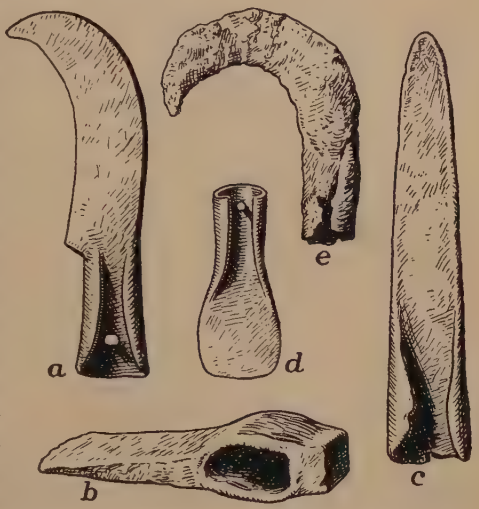

Fig. 40.—Iron agricultural implements: (*a*, *d*) Mount Caburn, Sussex; (*b*, *c*) Bigbury, Kent; (*e*) Wookey Hole, Somerset. *a*–*d* [$\frac{1}{6}$]; *e* [$\frac{1}{3}$].

influences of the invasions, many of them as indisputably were in the direct line of man's previous development in Britain.

As regards the actual manufacture of iron, whether it was or was not discovered independently in this country, there is no doubt that the metal itself was extracted from ores obtained from British soil. The iron mines of Sussex, which were mentioned by Caesar, and which were not finally abandoned until the Eighteenth Century, were, in all probability, first worked by the Brythons long before the Belgae settled in that district. And not there alone, in other places, in the Forest of Dean, for instance, and at Hunsbury, near Northampton, iron was likewise mined and manufactured at this time, as many prehistoric slag heaps testify. As yet, however, no furnace of this period has been discovered in this country; and for that reason, and because of the peculiar character of the slag itself, it is practically certain that the type of furnace in use here was merely a shallow, conical hole in the ground, having an artificial draught introduced over the edge of it. In this hole a fire would be lighted, and on it placed alternate layers of charcoal and crushed ore; the whole being kept at a high temperature for several hours by the blast of some rude form of bellows, until a white-hot mass of malleable iron was obtained. This primitive but effective type of furnace is represented on an Egyptian tomb, *c.* 1450 B.C., and it has been traced in many widely separated places; for instance, it was found in use in India about seventy years ago, and has actually persisted in the Pyrenees until our own time.

The further details of the manufacture of wrought-iron objects from this stage onwards need not here be discussed. Few, indeed, of us have not at some time or other been irresistibly drawn to the open doors of a smithy, there to stand and gaze, fascinated by these

selfsame operations in actual process—were they only the fashioning of a horse-shoe. And if it was our fortune to have lingered there in the gloom of an evening, but little imagination was needed sympathetically to recapture the mental attitude with which these, our early British forefathers, regarded this craft; to watch with their unaccustomed eyes the glowing white-hot mass of metal under the hammer growing visibly, yet how marvellously, into recognisable shape; and see the glorious, spraying showers of sparks, and, in their very midst, the smith calm and unscathed like a god; and all the time to hear with their ears the forge in full blast roaring and panting like some angry beast. Small wonder if folklore tells of the fear and awe with which the early workers in this new and terrible metal were everywhere regarded; or if it speaks of the mystery which gathered round and enshrouded the craft until the smith himself took on an uncanny and even a supernatural aspect—as, for example, in the ancient legend of Wayland Smith, which, strangely translated to Elizabethan times, is known to most of us in Scott's "Kenilworth."

As many of the principal objects of iron culture are alluded to elsewhere in this part, we need here only note that while the new metal came to supersede bronze for many purposes during this period, its most important and extensive use was in the manufacture of cutting and piercing implements—weapons and tools alike. Thus among the weapons which, it should be remarked, constitute at this time an even smaller proportion of man's remains than formerly, we see that the spear-heads are now made of iron, as are also his daggers and swords, though many of these still retain a bronze handle for ornamental purposes. But while the swords, straight edged now and tapered at the point, witness almost without exception to continental influence, the spears, even though varying

indefinitely, continue to be distinctively British in type, from which it would seem that the older inhabitants remained, on the whole, constant to the favourite weapon of their forefathers; and that the new-comers for the most part preferred the sword.

Among the multifarious iron tools, many of which approach modern forms, we can recognise knives of

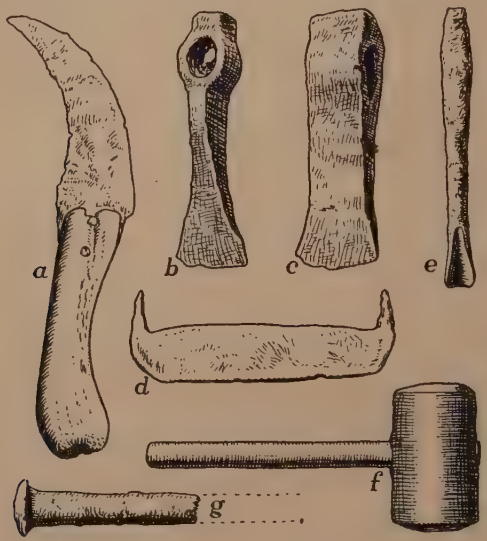

Fig. 41.—Tools of the Early Iron Age: (*a*) Standlake, Oxon [$\frac{1}{3}$]; (*b*, *c*) Hunsbury [$\frac{1}{6}$]; (*d*) Wookey Hole [$\frac{1}{3}$]; (*e*, *f*, *g*) Glastonbury [$\frac{1}{2}$, $\frac{1}{8}$, $\frac{1}{4}$].

all sorts, some still retaining their original handles (Fig. 41, *a*), adzes (*b*) and axes (*c*), files and rasps, chisels, draw-knives (*d*), gouges (*e*), punches and awls. But the two thousand intervening years fade from our minds in a curious feeling of immediate kinship with these forefathers of ours when we are confronted with such familiar things as the wooden mallets (*f*), and

iron bolts (*g*), discovered at Glastonbury. Not less interesting, perhaps, are the saws (Fig. 42), for their teeth were set, or bent alternately to either side, as in modern saws, and for the same reason—that they might cut a groove a little wider than the thickness of the blade itself, and thus prevent undue friction on it, and also the risk of the saw being gripped in the walls of the groove it is cutting. But, with one or two exceptions which have equilateral teeth, all the saws, because of their comparative slenderness, were made to cut, not like ours with the pushing stroke, but with the

Fig. 42.—Saw in original ash handle, Glastonbury. [Length, 16 ins.]

pulling stroke—a type of saw used still in oriental countries.

More remarkable still was the employment of machinery in certain industries during this period. The mechanical contrivance known as the lathe—first, perhaps, appearing in the closing years of the Bronze Age—now came into general use. And though most widely employed in the working of wood, as beautifully turned naves and spokes of wheels, bowls,[1] and numerous other objects testify, a number of articles of bronze and bone have also been found bearing the unmistakable signs of its use. The introduction of the potter's wheel likewise simplified the making of domestic and funereal pottery;[2] and it, too, came to be extensively employed before the end of this period.

Yet, although these things had been made possible in the Early Iron Age by the progress of civilisation, it

[1] See p. 222, Fig. 46.
[2] See p. 237, Fig. 49.

does not follow that they were common to the whole of Britain. Indeed, the cultural standard varied much in degree throughout the country, from the high attainment of the south-east to the remote districts in the north, where the Bronze Age lingered on, and iron was not known until the Romans themselves brought it thither. But such places, it might almost be said, were peculiar rather for the lack of iron than for the persistence of bronze: for the fact is that everywhere, in spite of the new culture, bronze remained in constant daily use—only certain of its functions having been usurped by iron. For most of the purposes of decorative art, for many articles of personal use and adornment, and also for certain domestic appliances, the older metal, as we shall presently see, retained still for man its ancient value. Thus the various industries implied in the continued use of bronze must not be overlooked in a survey of the economic aspects of this period: the tin and copper mines being still worked, and the ores obtained therefrom smelted and cast into ingots for the use of the bronze-founders, as in the previous period. In addition to these metals, lead was mined and smelted in the Mendips, and most probably in Derbyshire and Flintshire also, long before the Romans came and carried on the same industry in those places.

Besides all the above-mentioned activities, which for the most part necessitated the distinct and separate callings of the agriculturists, neatherds, shepherds and swineherds, and of the miners, smelters, founders, cutlers and smiths, this period witnessed the rise and specialisation of other industries. The workers in wood —carpenters, coopers, wheelwrights and shipwrights— attained a very considerable degree of proficiency in their peculiar crafts. For such things as ploughs, looms, ladders, lathes and potter's wheels, as tubs and buckets, as wagons and war-chariots, and as ships and boats, are only alike in requiring specialised knowledge and skill

for their construction. The leather workers, likewise, in the tanning of hides, in the dressing and dyeing of leather, and in the making of harness, must have been highly skilled craftsmen, if the numerous beautiful horse-trappings—not to mention the ancient Keltic legends—have any significance at all. Glass working was also carried on in Britain, for besides glass pin-heads and numerous coloured glass beads of native manufacture, there have been found glass slag and crucibles—one of which still bears traces of fused glass adhering to it. There is also evidence that even quite minor but necessary industries, such as the making of bone needles, were specialised crafts at this time.

While the foregoing are the chief among the industrial occupations of the men during the Early Iron Age in Britain, there were others in which it seems certain that women were exclusively employed. First in importance, probably, was the cloth industry—spinning, weaving and dyeing. Numerous discoveries have been made of the spindle whorls used in the spinning of wool and flax into yarn or thread. Evidences of weaving are likewise abundant. There are the loom-weights of baked clay or stone, which were hung on the ends of the warp—or longitudinal threads—to give it the necessary tension on the loom for the act of weaving; there are the bone bobbins of the shuttles, and the bone and horn hand-combs used to close up the weft—or horizontal threads—as it was woven in and out of the warp by means of the shuttles. Further, there have been discovered, preserved in the peat at the Lake-village of Glastonbury, many carefully worked portions of wooden frames which are generally thought to be the remains of the actual looms themselves. The cloth-weavers would seem to have been responsible for the dyeing also, but whether these operations preceded or followed the process of weaving depended probably on the effect desired. Our ancient

forefathers revelled in bright colours and plenty of them—the modern tartans, in fact, being a survival of Goidelic taste. Hence, while the colour arrangement of the tartan suggests that from the first it was woven of coloured threads, fabrics of a single colour would be dyed after being woven. The dyes themselves seem to have been obtained from lichens, as in Wales at the present day, and from the barks of various trees. Finally, as in the previous period, the women carried on the manufacture of the common household pottery, now made both by hand and on the wheel, and showing by its many forms an ever-increasing variety of domestic requirements. Such, likewise, was the case with the basket-making, dairy work, and the brewing of beer and mead, not to mention all the unceasing, multifarious and obvious duties implied in the workaday life of the home.

Such progress and specialisation of industry as the above meant for society, of course, an enormous increase of economic interdependence, and therefore, inevitably, of internal trade. All the evidence at hand points to this, and actual proof of it is supplied by the definite appearance of money, presently to be discussed. The quite extensive manufacture of iron, in addition to that of bronze, brought about a corresponding increase of internal traffic, both in the raw materials and the finished articles ; and hence we must picture the pedlars and tinkers as continuing their activities, and in far greater numbers than formerly. So great was the volume and variety of trade that the populous villages, such as Hunsbury and Glastonbury, must have become, as it were, shopping centres for the surrounding districts—centres to which farmers from the countryside brought for sale corn and flesh, hides and wool, and dairy produce ; and from which they returned to their homesteads with purchases of harness, cloth, agricultural implements, and so forth. Indeed, it is not

improbable that this period saw eventually the institution of the market day—a simple and inevitable device for the more convenient disposal and acquisition of the products of town and country.

Contemporary with, and part and parcel of, this progress of internal trade was the remarkable development of the foreign commerce, whose definite beginnings in the Bronze Age we have already seen. As early as the transition—for which, indeed, this commerce is primarily responsible—contact was established between Italy and Britain, and bronze objects, such as brooches, buckets and jugs, began intermittently to be imported. It is thought by some to have been this traffic, by others the early bronze coinage, to which Caesar alluded when he said that the Britons imported their bronze. But these views are not borne out by the construction of the whole sentence—"Tin is produced there in the inland parts, on the sea-coast iron, but the supply of it is small; the bronze they use is imported."[1] From which it is plain that he was speaking of raw materials; and, what is more, speaking not from facts of personal observation, but, apparently, from information which he had not time, or interest, to verify. With regard to bronze he was, as we have seen, absolutely wrong. With regard to iron he simply fell short of the whole truth; for while the supply of iron from the maritime mines may have been small, there were, as we have seen, other native sources of supply; and if when compared with Italy, or even Gaul, its use may have seemed restricted in Britain, still its use here at this time had become fairly general, and, as short a time as some sixty years later, Strabo says that iron was actually being exported from this country. While, as regards tin, Caesar was possibly told that the mines were many days' journey from those south-eastern parts of Britain, which were all

[1] *B.G.*, V, 12, § 5.

that he knew; and so, quite naturally, if mistakenly, he placed them in the interior.

But our knowledge of the developments of the British trade in tin, subsequent to the ancient Phoenician trade, we get from an earlier traveller than Caesar. Whether it was Pytheas, about 330 B.C., or Posidonius, about 90 B.C., from whom Diodorus Siculus derived his information is not certain; but what is certain and more to the point is that his description is based on an account of things actually seen and acutely observed. This traveller, whoever he was, visited the tin districts of Cornwall and found the inhabitants very friendly, hospitable and civilised. He noticed that the ground was of a rocky formation with earthy veins from which the ore was obtained. Then, after the ore had been ground down and smelted, the tin was purified and cast or beaten into knucklebone shapes for convenience of transportation. Thence it was carried in wagons to an island, called Ictis, which was accessible to such vehicles only at the ebb of the tide. And to this place came merchants who bought the tin from the natives and shipped it over to Gaul, where it was carried overland by pack-horses to the shores of the Mediterranean at the mouth of the Rhone. For a number of reasons it seems most probable that Ictis—or Mictis, as it is sometimes called—can be identified with St. Michael's Mount; though the Isle of Wight, and even Thanet, have their claimants.

More light on the extent and volume of the foreign trade of Britain, previous to Caesar's invasion, is derived from other sources. A small amount of the sea-borne traffic at this time was probably carried on in British ships; but there is no doubt that the greater part of it was in the hands of a Gaulish tribe, called the Veneti, then occupying the Morbihan district of Brittany. Caesar himself remarked that they "have

a great many ships, in which they are wont to sail to Britain"[1]—obviously not on pleasure trips. And it was these people who, fearful that Caesar's projected invasion of Britain would utterly ruin this trade, actually brought about a combination of the various tribes in the north-western and northern regions of Gaul, and with them made war on Caesar with the single idea of preventing it. They failed in their endeavour, as we know, with consequences disastrous to themselves, for Caesar destroyed practically the whole of their shipping. In spite of this, however, British commerce during the ensuing years flourished exceedingly; and, probably with an increasing precentage of British ships, closer and more extensive trade relations with the continent were established. So much so, indeed, that the Romans, about 26 B.C., relinquished for the time being the long-contemplated conquest of Britain, on the grounds that the probable tribute they could exact would not be nearly as productive as already were the duties paid at the different ports of Gaul on the imports and exports of this country.

Again it is Strabo who furnishes us with certain particulars regarding British commerce in the early years of our era; and thus we gather that this country was by that time exporting corn, cattle, hides, gold, silver, iron, slaves, and dogs; while its imports comprised ivory, gold necklaces, vessels of glass, and amber. And we have only to think back to the beginnings of our foreign trade in the Bronze Age to realise the full import of such a development. Small wonder, then, if another thirty years of like progress caused the Romans again to turn their eyes towards this remote northern island; or if such industrial and commercial attainment made it at last well worth their while to bring these "barbarians" within the pale of the Empire.

[1] *B.G.*, III, 8, § 1.

CHAPTER XIV

Money—Its Use and its Effects

THE definite appearance of money in Britain during the Early Iron Age was an occurrence of the greatest importance in the long story of our developing civilisation—and this not only because this new medium of exchange was primarily responsible for the commercial expansion considered in the foregoing chapter; but even more because it has so profoundly affected the social as well as the economic outlook and life of mankind ever since its first use. It would, therefore, seem necessary in a survey concerned chiefly with those particular aspects of civilisation, to trace if possible its origin and functions. For only so can we arrive at a clear conception of what money really is, and thus be in a position rightly to judge the effects of its use on the human mind.

We have seen how man in a natural state could satisfy the few needs of himself and his family by dedicating a certain amount of time to the labour of the chase; how his needs, growing more numerous and diverse as civilisation developed, at length out-distanced his individual efforts to keep pace with them, and so led to the gradual specialisation of industries; and, finally, how, for the individual, specialisation naturally resulted in an excess of one thing and the lack of many others—with the consequence that this and that man's surplus came to be exchanged in actual kind, each supplying the other's need. Thus arose barter,

and it was barter alone, which made it possible for a man to concentrate his energies on any one particular activity, not necessarily the production of food, and still support himself and his family by the labour of his hands. Arrived at this stage there followed thousands of years during which civilisation was slowly developing in other directions, while its source and fount, barter—or, in other words, mutual exchange—remained the sole method of trade. Then, as we know, came the middleman complicating and obscuring the earlier, simple and direct relations between producer and producer. And with his coming the disadvantages inherent to barter—not hitherto very apparent to participants living in the same or adjacent villages—inevitably became more pronounced; because sacks of corn, bales of wool and flax, and cattle, taken in exchange for the more portable bronze goods, must often have proved inconvenient, to say the least, when the merchant was travelling long distances. Hence we are not surprised to find that the first artificial medium of exchange in this country was evolved not long after his appearance, and, not improbably, by the merchant himself.

Some people have thought that they have found this new medium of exchange in certain small incomplete rings of bronze and gold which date from the late Bronze Age. But although these rings are often called "ring money," it is almost certainly a misnomer. The absence in their manufacture of any uniform standard of size or weight would render their use as money doubtful; while the fact that they have frequently been found attached to torcs and bracelets seems to point conclusively to an ornamental origin and use. That, however, is not to deny that on occasion they may have been detached and given in exchange for this thing or that, exactly as a crusading knight in the Middle Ages would pay his way across Europe with links broken off the gold chain he wore about his neck; but

such acts, being nothing but barter, cannot be said to have established a currency.

It was not until the Early Iron Age that we have indisputable evidence, material and historical, of the use of money in Britain. And here it first took the form of iron bars (Fig. 43) not unlike sword-blades in shape and size, except that they are even in thickness, square-edged and unpointed, and have, at what may be called the handle end, the edges hammered over to form a sort of socket. From the numerous examples which have been found it is proved that this bar-money was made in five standard weights—weight, of course, indicating value. The unit (*a*) weighed approximately eleven ounces, and there were the half (*b*) and the quarter weights below it, and above it the double (*c*) and the quadruple. But there was at least one intermediate weight in use—one and a half times the unit.

Fig. 43.—Iron currency bars [$\frac{1}{8}$].
(*b*) Half-unit, Meon Hill, Glouc.
(*a*) Unit, Glastonbury.
(*c*) Double-unit, Hunsbury.

Because the ancient Spartans are the only other people in all Europe known to have used a bar currency, it has been tentatively suggested that the Britons got this idea from Mediterranean traders, who sailed to these shores in quest of tin. But there is very little to be said for this hypothesis, and all the probabilities point to the bar currency of Britain being a native development.

As such, it would be especially interesting if we

could trace something of its evolution. A little light is thrown on it by the discovery of a contemporary bronze cheese-shaped weight which is marked with the letter or figure I, and weighs practically the same as the unit of bar money. Further corroboration of this standard comes from the continent, where a stone weight has been found similar to it in shape, bearing the same mark, and weighing only three grains less. And, in passing, when with difficulty we remember that three grains are less than a hundredth part of an ounce, we can only marvel at the accuracy with which the standard was maintained. Weights and measures of a sort were in use, of course, much earlier than this period; and this particular standard of weight, which has, in fact, been further corroborated by other discoveries in Britain, must have been in existence before the bar money could be based on it. Hence it is probable that this iron currency started originally as barter pure and simple, with man in this place and that obtaining by the exchange of a certain measure of corn or some other commodity, such or such weight of this precious metal in the form of a bar, which is the most convenient and obvious form for subsequent working. Then these bars which, because of the rarity of iron, retained their original value, would here and there begin to be passed on at second and third hand, and so would gradually come to be acknowledged, not yet as money, but as things which, having a recognised value, were therefore realisable in any market. This stage we may call "deferred barter." And arrived at this stage it would not take man long to appreciate the personal convenience of such transactions; for now he can buy in his own time and sell just when he pleases; and he has no longer the trouble of finding some one who, besides having for sale what he wants to buy, happens also to want what he has to sell. And this foretaste of trade emancipated from the clogs

and fetters of barter would inevitably lead to the general use of standardised iron bars as a medium of exchange. Once established, this bar money continued in use while iron was becoming more and more plentiful. There are, however, no means of ascertaining how the growing commonness of iron affected this currency. But it would seem fairly certain that it depreciated from time to time, the purchasing power of the bars growing less and less with the falling value of the metal itself. In spite of this, however, these iron bars were still passing from hand to hand when Caesar came, for he noted as a remarkable thing that the Britons used "bars of iron adjusted to a certain weight for money." [1]

But iron bars, if the first, were not the only currency used in Britain in the Early Iron Age. About 200 B.C. gold coins, bearing unmistakable signs of foreign derivation, began to appear in the south-eastern districts. It is known that, rather more than a hundred years earlier, gold coins of Philip II of Macedon had been introduced into the south of Gaul by the Greek traders of Massilia. These coins, bearing on the obverse a laurel-crowned head of Apollo, and on the reverse, a charioteer driving a pair of horses, and an inscription "Philippos," are known as Macedonian staters. And, imitating them, the Gauls made for themselves coins which, slowly spreading northwards, at length reached the country of the Belgae. It was thus most probably the Belgae who, on their invasion of Britain, brought with them some of these Gallic imitations of the stater, now much debased by successive copying. And it was these coins that in their turn became the models on which the first British coinage was founded.

In the course of time, however, the metal dies in which these coins were struck would inevitably wear out; and the early British die-sinkers, when engraving

[1] *B.G.*, V, 12, § 4.

new dies from time to time, naturally copied those about to be replaced. Thus we find in Britain, as a result of this repeated copying, a series of coins departing more and more from the Macedonian original. And this divergence can be traced step by step until Apollo's head at last comes to be represented by a cruciform pattern, or a band of ornament reminiscent of the laurel wreath; while of the charioteer and his horses and chariot, all that is left is some grotesque quadruped whose legs are detached from its body.

The first mint to be established in Britain was almost certainly set up in Kent, for there the early coins have been found in the greatest numbers. All the earlier coins were made of gold, in two values only —the lesser being one quarter of the greater. None of them, however, were inscribed until about the time of Caesar's invasion. Then, or but little later, the names of British princes began to appear on some issues; and it is this class of inscribed coins which has afforded valuable clues to our early political history. Roughly about the same time we have the first evidence of different mints at work in other parts of the country, at Verulamium (near St. Albans), and at Camulodunum (Colchester). Likewise, with these developments, silver, bronze, and tin currencies appeared, having a comparatively wide range of values, some quite small, and proving by their very existence that where this money was used it was now entering into the everyday life of the people. And with the coming of these new currencies gold coinage gradually dropped out of circulation and disappeared.

It was, of course, owing to the conveniences and facilities provided by this Early British coinage for all the purposes of trade, that before the Roman conquest these coins had reached as far as Yorkshire in the north, and Cornwall in the west, supplanting the old and incommodious bar currency in those districts

where they circulated. But while numerous discoveries of British coins in Gaul, and of Gallic coins in Britain, prove the existence of advanced methods of trade between the two countries before the close of this period, yet in the remoter parts of Britain beyond the radius of the bar currency, barter still persisted as in Neolithic times. Indeed, even as late as the Third Century of our era, Solinus, a Roman geographer, reports that the inhabitants of the Scilly Isles would have nothing to do with money, being still content with the ancient method of barter.

Such, then, in Britain, were probably the origins of money, and the lines along which it developed in the Early Iron Age. There remain now to be considered the functions of money, and also its effects on the mind of man.

It is true, as we have seen, that the exchange of the products of specialised labour was the basis of all civilised life down to the Early Iron Age—true, if also fairly obvious while barter persisted. Yet it is just as true that our modern civilisation, however complex it appears, is ultimately based on that selfsame foundation. Nevertheless, it seems mainly due to the fact that society, past and present, has failed to realise this, that such unsocial and uneconomic phenomena as the millionaire and the pauper are to-day tolerated in our midst. That being so, how and when did this mental blindness arise?

It was very early recognised by man that, not being spoon-fed by nature, he must labour in order to live; and, equally, that he must be able to live by his labour. And it followed from that conscious or subconscious realisation, in the age of barter, that the worth of the thing produced was normally in direct relation to the labour and time spent on its production. Thus, putting aside the accidents of famine and pestilence, robbery and slave-labour, one man's need equalled

another's in degree though not in kind; so that barter was essentially a mutual exchange of labour, by means of which each man might live up to the cultural standard of the time. Barter could neither have originated in, nor have been perpetuated by, the sole desire to better oneself at the cost of another; on the other hand, human nature being what it is—and was—neither was barter the outcome of an altruistic ideal. Yet because each of the parties to the transaction was himself a producer keenly alive—and rightly so—to the labour value of his commodity; and because they both necessarily met face to face to make their bargain, we may take it that the average exchange was on the whole fair and equitable. So it was, for thousands of years, that man was compelled by the very nature of barter to think of value in terms of labour. And even when bar money first was standardised, this criterion of value remained unchanged, because the bars at that time could only have represented so much labour of miner and smith transformed into so much desirable metal—an interesting illustration of this point of view being recently found in Somerset, where these currency bars had actually been converted into articles of use.

Not then, but a little later, came the change. When this bar money was well established and was passing from man to man without any thought of its material use; when the ancient single and complete act of barter was broken up into the two separate operations of selling and buying; and when those two operations, though vitally interdependent, began slowly to lose all apparent relation or connection with each other,—*then* it was that man's mind began to be obscured, and the essential values of labour to be lost sight of. And when he had once realised that, unlike food and many other of the productions of labour, money was practically imperishable both materially and potentially it was then that money ceased to be only a symbol

of labour, and became, as it were, a thing apart, an aim as well as a means. So it was that man came to desire money for its own sake as well as for its possibilities; to scheme and to work for its possession as a means of power as well as of existence; and to hoard it in secret for any of the various ends the human mind is capable of conceiving. And so men, as we shall see, became capitalists in the Early Iron Age.

Looking back we can trace the main tendencies which made such a development possible. We can perceive how man, schooled by the practice of agriculture and pasturage for thousands of years, had grown accustomed to take thought for the morrow. At all times, but even more in times of scarcity, he had resolutely to withhold his hand from the precious store of seed-corn set aside for the next spring sowing; had, often hungrily, to watch his last few head of live-stock grazing in the fields, and to refrain from slaughtering them. And thus, having to choose rather temporary privation than future calamity, he acquired the habit of self-discipline. But this long experience of agriculture and pasturage had a yet profounder result on mankind. When once he had become wholly dependent on these artificial food supplies, man began to be haunted by a fear unknown to those ancient hunting forefathers of his. Crops and stocks failed from time to time, and seasons of dearth and famine ensued, with such terrible consequences as have stabbed the human mind with a wound that has never healed —the dread of future want. And so man began to set his wits to circumvent the fickle and uncertain moods of nature; began to look forward even beyond the requirements of the coming season; began, in fact, to create each for himself a reserve against such future need. And with this one beginning to lay by something from his little, and that one nursing his abundance to still greater yields, the "saving" instinct was born

in man. For a long time, however, the only result of this endeavour to save in actual kind—in flocks and herds, and in the fruits of the field—was merely that man became a farmer on a larger scale, and added to his responsibilities and risks : because such possessions could not be hidden from his fellows, and, in that unrestful state of society, probably became sooner or later the object of plunder. But iron bars did not want feeding or tending. In a score of ways they could be easily hidden from sight. They could even be kept for years with their value undiminished, and then be changed back into food and clothing at will. For these reasons the bars very soon began to be treasured up in secret places ; and what we now know as wealth became possible to man.

But, as we have so frequently seen in the previous chapters, every fresh development of civilisation revealed to man greater possibilities of evil as well as of good. And the introduction of money, with all its many conveniences, was likewise a very mixed blessing for mankind. For when the safeguards inherent to barter had vanished with the divorce of selling and buying, those half-acts themselves, and the increasing activities of the middleman, offered more and more scope for unjust dealing. Thus labour came to be pilfered from this man's necessity, that man's trust, and another man's folly ; and by these means, also, bar was added to bar in the secret hoards, and wealth was amassed in a way impossible before the appearance of money.

Here and there about the country these hoards of bar money have been found from time to time, carefully buried in the earth for security. Two of the hoards each contained about one hundred and forty bars ; two others about one hundred and fifty each ; while in a fifth no fewer than three hundred and ninety-four were counted. And as with the old bar currency, so it was

with the later coinage; large hoards of Early British coins being discovered in many places, while Roman and post-Roman times present the same phenomenon.

But to the seeing eye these hoards are not money—not even iron bars, or gold or silver discs. Rather are they weeks and months of labour stored up by self-denial, or the proceeds of extortion and oppression. For, rightly regarded, there never was such a thing as money, nor can there be. What we call by that name, be it little or much, is, on the one hand, a symbol, either of delay in the mutual exchange of labour between man and man, or of labour appropriated by the state for the common weal; or, on the other hand, it is simply labour robbed of its recompense. There is no other alternative. Yet it has been the continual failure of society to recognise and reassert these truths that has been responsible for perhaps most of the social and economic problems of the past, and of the present day.

There is yet one other fact in connection with the appearance of money, of particular interest for us who have been watching the diverse expressions of the mind of man during all these countless centuries of development. In spite of the safeguards of barter, if, as is very probable, one of the parties to the transaction did occasionally happen to get a pig in a poke, it was, after all, some sort of a pig. But what of the man who in this period sold his pig for a forged coin? For Early British coins of base metal thinly covered with gold have been found not infrequently, showing that there was a considerable amount of fraud practised even at that early date.

We must not, however, suppose that either unjust dealings, or counterfeit coins, indicate the birth in the Early Iron Age of a new characteristic of man's mentality. They are but a further expression of that same anti-social spirit, the presence of which we have previously traced as far back even as the Neolithic

Age—they are but one of the effects of man's egoism, just as his egoism is one of the effects of his primeval instinct of self-preservation. For there was an evolution of his individualistic tendencies as well as of his social inclinations. And though both of these impulses were derived ultimately from his pre-human ancestry, there always has been a continual conflict between them—a conflict of which the development of civilisation is itself the picture.

The preceding discussion of the effects of the use of money on the mental outlook of man may, then, be summarised as follows. Although self-interest was never absent from man's economic transactions, during the age of barter trade relations were first and foremost human relations in which by actual contact mutual profit was guaranteed. Then came money, at first simply as a convenience to this exchange of labour, and at first recognised only as the symbol of a merely temporary division of the act of barter into the two operations of selling and buying. And so man came to see trade as deferred barter. But this division widened; each party to the compact lost sight of the other, and buying and selling came to be regarded as separate and unrelated functions; and then the symbol, money, by losing its significance as the connecting link between producer and producer, became, in fact, dehumanised in quality. Thus man came to think of value in terms of money and not of labour. Thus because of its potentialities money became a desirable possession in itself. And thus arose the vicious habit of thought which has ever since seen money only as representing comforts and advantages of all sorts—as though these things could be, or ought to be, obtained without the exchange of their full equivalent of personal labour. And, after two thousand years of experience, man's mind is still bemused with this figment of the Early Iron Age—and the end is not yet.

CHAPTER XV

Home Life

We have, happily, no longer to depend on the few meagre descriptions of Gaul by contemporary Roman writers for our knowledge of the everyday life of the Early Iron Age in Britain. Modern scientific excavation and research have brought to light in many different parts of the country numerous intimate records of the domestic life of the people, as well as of the economic conditions which governed their existence. Thus we know that the dense population, of which Caesar speaks as living in huts like those of the Gauls,[1] was, in fact, housed in several different kinds of dwellings—the local type being of necessity largely predetermined by the physical character of the surrounding district. It is certain, for instance, that the old traditions of hut building still persisted. Pit-dwellings which have yielded up remains of this period have been discovered in Oxfordshire, Wiltshire, Dorsetshire, and elsewhere—dwellings which, if they were to be judged only by the size and shape of the holes, differed not a whit from the homes of man in the Bronze Age, or even earlier. Nevertheless they must have shown many improvements in construction and convenience at a time like this when all things else—and domestic economy not least—were progressing so rapidly. And, indeed, such improvements are very evident in another type of dwelling of similar antiquity.

[1] *B.G.*, V, 12, § 3.

In marshy ground and in shallow water man still built his lake-dwellings; a form of habitation which, known to history as crannogs, persisted in Scotland and Ireland from the early years of our era down to mediæval times. And, as it happens, it is from the sites of two neighbouring settlements of this type—the lake-villages of Glastonbury and Meare, in Somerset—that the fullest and most interesting evidence of the domestic life of the latter part of this period has been gathered. Distant only three miles from each other, flourishing at the same time, and the evidence of the one for the most part duplicating that of the other, we need here only concern ourselves with Glastonbury, the better known of the sister villages.

At Glastonbury, then, the site chosen for the settlement was originally an island of soft peaty ground, from three to four acres in extent, surrounded by the waters of a shallow mere; and in that unlikely spot a large village of nearly eighty huts was erected, and further defended by a strong encircling palisade. On this peaty foundation was laid timber and brushwood and, lastly, the clay floors of the huts, much as in Neolithic times, but now so scientifically ordered as to show a great advance on the earlier haphazard methods. East of the village and outside the palisade, a causeway ran out into the lake and ended presumably in a landing stage. Composed of timber, brushwood, clay and stone laid on the peat-bed, this structure was, in addition, edged and held in place by planks, timber and piles.

The huts themselves were more or less circular, ranging from eighteen to twenty-eight feet in diameter; but it is interesting to note that there had been earlier huts on the same site or in the near neighbourhood, which were rectangular in plan; for the mortised beams and corner posts of their walls were thrown down and used in the substructure of the village at present under

discussion. Throughout the village the walls of the huts were constructed of strong upright round posts at an average ten inches apart, driven through the clay floor into the substructure; the spaces between them being filled in with wattle and then plastered with clay, which was smoothed to a good weather-surface on the outside. This we know because numerous fragments of baked clay bearing the impressions of the wattle have been found on the floors of the huts which had been burnt down. It is not certain, though possible, that the walls were plastered inside as well as outside, as elsewhere they have been proved to have been. The wall posts and a centre post supported the rafters of a conical roof which was thatched with reeds, rushes, or straw, and provided with a smoke vent—charred fragments of the actual reed-thatches having been found among the remains of conflagrations.

The door posts of the huts were sometimes of squared timber; and the doorways, often provided with sills of wood, were from four to six feet wide, which seems to suggest a more convenient height than formerly. Of the doors themselves we know nothing; but the frequent occurrence on the hut sites of this period of curious iron instruments called latch-lifters, or keys, probably indicates that wooden doors were now in use. A small pivoted wooden door was actually found at Glastonbury, but it is much too small for this particular purpose. Its use is uncertain, though it may quite probably have served as a window shutter. We know that many different industries were carried on in the huts; hence the need for more light than the open door afforded probably induced man to make a hole in the wall and cover it with a movable door, or shutter, such as this; it is certain, however, that windows were constructed in another type of dwelling, presently to be discussed. Inside the hut, the fireplace customarily occupied a more or less central position; the hearth

being made usually of baked clay, sometimes ornamented with impressed patterns, but hearths of stone, and of gravel also, were not infrequently found. And, to conclude our description of the actual fabric of these homes of man, many of the huts were floored with split wood boards which, in two instances, were raised above the clay floor on joists. And there was evidence that one dwelling had been divided by wattle partitions into two rooms.

Built on such an unsatisfactory foundation as a spongy peat-bed, the floors of most of the huts seem to have been gradually sinking throughout the whole

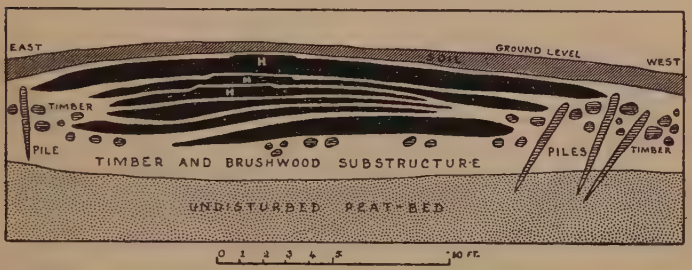

FIG. 44.—Section through a hut site at Glastonbury, showing superimposed clay floors in black. H, Raised hearth.

period of occupation; and to keep them dry new floors of clay, and, occasionally, of timber and clay, were added from time to time (Fig. 44). On one site as many as ten different and distinct floors have been found one beneath another. This slow sinking of the substructure of the huts, which necessitated rebuilding as well as reflooring from time to time, was an occurrence more fortunate, one would think, for us than for their inhabitants—though for them, perhaps, it was not altogether an unmixed evil from the sanitary point of view. We, however, can appreciate a series of Late Keltic phenomena, which by the addition of new floors chanced to be sealed up at intervals during a

period of some two hundred and fifty years, and only recently with the utmost skill and care laid bare, examined, tabulated and recorded by the most competent observers. Thus we are enabled to trace the extending use of iron from its rarity on the lower floors to its frequency on the upper floors; to note that the huts usually increased in size with each rebuilding; and to observe the inception of such domestic improvements as the wooden floors which began to appear about the middle period, and ovens which seem to have been late developments. And thus, in a comparatively short time, we can perceive that definite progress of civilisation, to see which hitherto we have had practically to leap from age to age.

Leaving the lake-dwellings to glance at the other types of man's habitations at this time, we have, oddly enough, to go only about four miles from Glastonbury to the foot of the southern slopes of the Mendips, to find a cave, called Wookey Hole, which was inhabited by a small community of people contemporaneously with the neighbouring lake-villages. Unlike the cave at Heathery Burn, those parts of Wookey Hole which were occupied are dry and peculiarly free from drip; and its dryness, its equable temperature—never falling below fifty degrees even in winter—and its defensibility against attack, were probably its main attractions to Late Keltic man. There is reason for thinking that the mouth of the cave was protected by a stockade in which was a door; certain it is that the skilled workers in wood and iron who lived there were capable of such a contrivance. Their civilisation more or less approximated to that of the lake-villagers: they possessed flocks and herds, and shod their oxen with iron hoof-plates for ploughing and probably for draught. In unsettled times, goats were penned in a certain part of the cave, in which connection it is satisfactory to note that the ventilation of the cave is admirable—large fires leaving

no trace of smoke in the atmosphere. They also stored their harvests of corn, peas and beans in large earthenware pots in remote but airy passages; and thus, with a stream running through a portion of the cave, they were prepared for siege or famine alike. Caves were elsewhere occupied during this period by people as respectable as these; but there were other places where the caves were frequented by outlaws and robbers.

Other early types of dwellings, which still persisted in those districts where timber was scarce, as in Cornwall, were the hut-circles and the beehive huts; the latter, in fact, lingered on for many hundreds of years in remote parts like the south-west of Ireland and the west of Scotland; while in the Hebrides they continued still to be the homes of men until the Nineteenth Century.

Generally found in the vicinity of the beehive huts and the hut-circles in Cornwall are the underground dwellings—locally known as "fogous"—which are generally ascribed to this period. They usually consisted of a long, slightly curving trench, or gallery, sometimes as much as sixty feet in length, and about six feet wide and high, paved, walled with dry stone, and roofed with large granite slabs. At one end the gallery opened out into a circular chamber built beehive fashion and floored with stone flags, and at the other end sloped up to where a small stone trap-door level with the ground provided entrance and exit. These concealed habitations—if such they were—occur also in Scotland and Ireland, but nowhere else; and there is but little known about them. There is, however, evidence to suppose that originally they were always associated with surface dwellings; thus it is likely that they were used as store-rooms normally, as places of refuge in troubled times, and, not improbably, as actual dwellings in severe winters. Here we may note

that Tacitus's statement to the effect that the Germans dug subterranean caves for use as winter dwellings and as granaries seems to point to a like conclusion.

In many of the inhabited sites of the Early Iron Age, such as Hunsbury, Worlebury, and Mount Caburn at Lewes, numerous small circular pits have been found closely distributed over nearly the whole occupied area. Usually about six feet in diameter and depth, they are too small to have been dwellings, yet their numbers show that they must have been adjacent to, if not actually connected with, surface habitations. Their use is somewhat problematical, but it seems to have varied even on the same site: for grain has been found in many of them—suggesting granaries or store places; and rubbish or refuse in others—implying middens. Strangely enough the surface buildings in most of these places have left nothing to indicate their character. At Mount Caburn, however, were found some small fragments of wattle and clay walls plastered on both sides, from which we may suppose that the huts were like those at Glastonbury, constructed entirely on the surface of the ground, and not sunk after the manner of the pit-dwellings.

Yet another type of dwelling was almost certainly found in Britain towards the close of this period—probably the homes only of the chieftain class or the wealthy families. The need for several rooms, noted as early as the Bronze Age, would become more and more marked as social organisation extended; thus, with the increase of wealth, and of the influence, dignity and functions of autocratic authority, more accommodation would be required for servants and retainers. Further, we should know that in Roman Britain the houses of the well-to-do were, both in plan and arrangement, utterly unlike the characteristic Roman house even while they conformed to the prevailing Roman fashions as regards such internal conveniences as hypocausts,

baths, and mosaic floors. These Romano-British houses are of two distinct types, which are not found anywhere else except in northern Gaul: the one, known as the "corridor" type, in which a row of rooms is connected by a long passage into which they open; and the other, known as the "courtyard" type, in which three similar rows enclose three sides of a court or quadrangle. Thus, although no remains of either type, which can safely be ascribed to Late Keltic times, have as yet been discovered, it seems practically certain that they were in process of being evolved at this time. We have already seen that rectangular huts were not unknown in this country, and with one of these divided into two rooms, each having an outside door, with the addition of a third and a fourth at either end, having their doors, as would be natural, all facing one way, with the thatched roof carried forward on posts to shelter the constant traffic between them, and, later, with the space between the posts filled in with wattle and daub, the corridor house, which is the older of the two, would seem to have been evolved. And with this type of dwelling, windows, even if not known before, became imperative and general.

In so many and such different ways, then, man housed himself in the Early Iron Age. Yet, except perhaps in the remoter parts of the country, the sites of these various habitations have yielded up much the same evidences of the home life of the family, the several aspects of which we must now proceed to discuss.

Returning again to Glastonbury, we can see how many of the different activities of the time were actually carried on in the home. Weaving was a home industry then as in many places it remains to-day, and at least four huts possessed their looms; such, too, was the manufacture of bone needles and pins, as the floor

of one hut testifies; but neither of these activities need have detracted much from the amenities of the home. It would even have been possible to live, one would think, in the carpenter's hut that was located. But one would have to have begun very young to have enjoyed life in the bronze-founders' huts, of which there were four, or in the more numerous blacksmiths' huts. Of course noise and dirt had not yet become offences such as we now regard them, but, even so, there were other drawbacks, and, not least among them, the perpetual risk of fire. And when, as was actually the case, crucibles, the remains of a smelting furnace, and the nozzle of a bellows are discovered on the floor of one bronze-founder's hut mingled with ash and the charred fragments of walls and roof, it is evident that the risk was both very real and ever present. From all of which it is very apparent that when we endeavour to picture the inside of the huts, we must remember that they would vary one from another according to the occupations, habits, and even the personal idiosyncrasies of their inhabitants, much as our own homes do to-day.

Little of value can be gleaned either from the brief Roman descriptions of Gaulish huts, or from the ancient Keltic legends, as regards the interior of the huts and the furnishing of them; and yet again we have to piece together the numerous but disjointed scraps of evidence supplied by the remains actually discovered, to arrive at a picture which shall be trustworthy in the main if somewhat blurred as to its details. Thus we may see these homes as circular rooms, anything between ten and thirty feet in diameter, rather dark—especially the larger ones—and liable to be plunged into sudden night every time a person passed in or out of the door. We must picture that alternation of dimness and darkness as proceeding indefinitely. But the first thing to catch our eyes

would be a thin grey skein of smoke stretched between the middle of the floor and the high conical roof, slowly unravelling itself as it mounts upwards from the raised hearth. Later we should notice the low couches round the walls stuffed with straw, heather, or bracken, and covered with rugs and skins—seats by day and beds by night; but it is doubtful if we should see anything else which we should now describe as furniture. There may possibly have been a low table in the room, but as there is no material evidence of this as yet, we cannot be sure what it was like. The table, however, did not become a fixed article of furniture until the Middle Ages, but was merely a board on trestles erected temporarily for a meal and afterwards dismantled. Further, we should remember that most human beings—including our own children—have no need of table or chair, the floor or, at most, a mat serving the purposes of both. Even the craftsmen would work squatting on the floor, as in India and elsewhere at the present day. The fact is the floor space of the hut was limited and valuable, and chairs and tables would only have cumbered the ground.

As it is, we have to find space within the hut for earthenware cooking pots (Fig. 45, *g*) and pans of all sorts and sizes, some of which would be standing round the hearth or in the hot ashes. In addition to these, space must also be found for all the apparatus used in the preparation or despatch of the meal—for such things as pottery colanders, strainers, basins, plates and dishes; wooden spoons and trenchers (*d*, *e*), bowls[1] and cups; jars and bottles, of which the wooden stoppers, or corks (*f*), have been found; bone skewers, iron hooks and chopping knives (*b*, *c*), and also the long pot-hooks (*a*) used with some sort of iron tripod to suspend pots and cauldrons over the fire; the bronze cauldrons themselves, and strainers of the same metal; and the

[1] See p. 222, Fig. 46.

ubiquitous and necessary stone hand-mills for grinding the corn. Neither must we forget the larger vessels—storage receptacles made of pottery (*h*), wood and basket-work, and wooden tubs and buckets.

Of course, it is doubtful if any one hut was equipped with all these articles, but a fairly representative selection would have been found in most homes. But that

Fig. 45.—Domestic utensils of the Early Iron Age: (*a*, *b*) Hunsbury; (*c*–*h*) Glastonbury. *a*, *b* [$\frac{1}{10}$]; *c* [$\frac{1}{8}$]; *d*, *f*, *g* [$\frac{1}{8}$]; *h* [$\frac{1}{6}$]; *e* [$\frac{1}{12}$].

is not all, we must make room in the hut for the implements and materials of the craft or calling of its inhabitants, as well as for their weapons, their personal possessions and ornaments, and their outdoor cloaks or mantles. Further, the houses of the wealthy contained also beautifully worked bronze flagons and tankards, vessels of glass, and silver cups and bowls. There, too, iron firedogs were being used on the hearth to support the burning logs. It becomes clear, therefore, that

when we add to the contents of the hut the corporal presence of two or more adults and some half-dozen children of various sizes, the want of what we call furniture did not necessarily mean that the home appeared, or was, either bare or empty. Doubtless many articles were hung on nails or hooks driven into the wall posts or the rafters, others being stowed away against the walls, and valued personal belongings concealed in the floor of the hut. Nevertheless, it is difficult to see how the floor could have been otherwise than cluttered with a variety of things which could only stand there and nowhere else. We may be certain, however, that there was an uninterrupted passage from door to hearth for the constant supply of fuel, and a clear space round the fire for the preparation and cooking of food.

If the paraphernalia of the meal seems to us to have constituted an undue proportion of the contents of these homes, we have only to think of our dining-rooms, kitchens, sculleries, larders and cellars, and the multifarious items of their equipment, to realise that we do not stand in much better case to-day. Because we choose to sit and lie with our bodies supported on contrivances of wood or iron some eighteen inches above our natural level, it does not necessarily follow that our minds are correspondingly elevated. The contents of an average home in Britain to-day, with its plenitude of objects related to food, its paucity of, say, books and pictures, and, what is more vital, the mental attitude of their owner towards this and that class of possessions, do not justify any very lofty contempt of the civilisation of these forefathers of ours—at least, on this particular count. Less still is it justified when the domestic utensils themselves are compared—theirs, beautiful alike in form and decoration;[1] ours, so frequently and so unnecessarily ugly.

[1] See next page, Fig. 46; also p. 242, Fig. 50 (*d*).

As food, both in its economic and social aspects, is discussed elsewhere in this part, it need not detain us here. But it is interesting to know that when the meal was over these people turned as gladly as ourselves to amusements, games and sports. Carousal, song and story prolonged the feast and were more than sufficient to while away the hours between food and bed. On ordinary occasions, however, other amusements were resorted to, some of them only less boisterous than the revel of the feast—games like that described in *The*

Fig. 46.—Domestic, lathe-turned wooden bowl, Glastonbury [¼].

Mabinogion as "the game of Badger in the Bag," in which the title rôle was taken by a man who seems to have been tied up in a sack to receive buffets from each of the other players in turn. But the legends tell us no more than this, which, if it were all, would appear to us a rather one-sided amusement—possibly, however, the Badger had to guess the name of the smiter, who, if recognised, would become Badger in turn. But in addition to such games, which provided ample opportunity for the horse-play and practical jokes beloved by primitive races and youth in general, there were others in which were used the counters of flat, polished

pebbles of various colours (Fig. 47, *a*, *b*) found on the sites of many of the huts, while small round objects of bone and wood, thought by some to have been draughtsmen, possibly indicate a game of that type. There are reasons for thinking that games of chance were played as early as the Bronze Age, nevertheless it is rather startling to find a number of well-carved and unmistakable dice of horn (*c*) and bone (*d*), and also a bone dice-box (*e*), among the remains of this period. Thus and thus, and in other diversions which have left

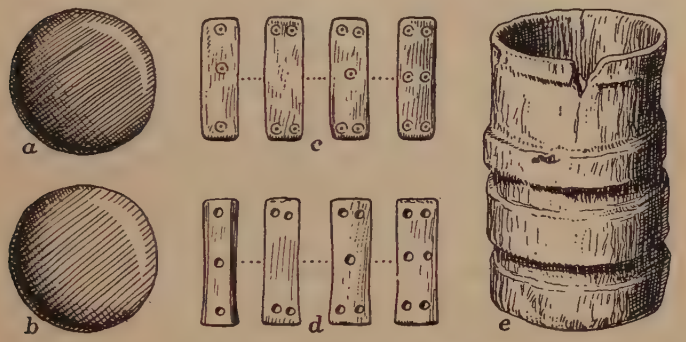

Fig. 47.—Dice, dice-box, and counters, Glastonbury. The counters (*a*, *b*) and others were found with the horn die (*c*). *a*–*d* [$\frac{2}{3}$]; *e* [$\frac{1}{2}$].

no record behind, the long winter evenings in the hut were cheerfully passed away by the light of lamp and roaring fire, while, outside, the snow lay thick and wide on pasture and fallow, and in the distant forests wolves howled to the frosty stars.

The ancient Keltic legends are full of stories of the pleasures and perils of the chase; and unquestionably these people spent much time in hunting the deer and wild boar with the aid of their dogs, of which they now possessed several breeds; and also in wild-fowling, using for this purpose slings and baked clay "stones," the latter being especially abundant among the remains

of the lake-villages. Except perhaps in the remoter western and northern parts of Britain, these pursuits, as we have previously seen, were followed now not from necessity but from choice; and even more for the amusement and sport they afforded than for food, however welcome the latter may have been. Thus the love of sport for its own sake, so characteristic of our race, was already beginning to show itself. But, disregarding for the moment any line of demarcation between legitimate and cruel forms of sport—which line, in fact, different individuals amongst us still draw in different places—this national trait was manifested during the period under discussion in another popular sport—cock-fighting. The spur of a fighting-cock has been found in no less than three Late Keltic settlements, in places as widely separated as Sussex and Somersetshire, thus bearing out the latter part, at least, of Caesar's remark that although the Britons did not think it lawful to eat poultry, yet they reared the birds for pleasure.[1] Cock-fighting has of course, persisted ever since, and even to-day, in spite of its illegality, is a furtive amusement in some parts of the kingdom.

To complete our record of the daily life of this period there now remain to be considered the toilet and the dress of these people, by means of which they made their persons pleasing, beautiful, or impressive in the eyes of their neighbours or themselves. Too much insistence on, and an unqualified acceptance of, certain of Caesar's statements in the past have had the unfortunate result that most of us to-day still subconsciously picture the "Ancient Britons" as running about, chiefly among trees, proudly displaying all of a bright blue skin which is not hidden by scraps of old fur rugs. The picture has a certain charm, that of long familiarity, at least, besides showing how easily and

[1] *B.G.*, V, 12, § 6.

quickly we Britons can do anything—become civilised, for instance—when once we set about it.

In this survey, however, it is our endeavour to ascertain the actual facts of the long story of man's early development, which modern research has brought to light. Thus we must now picture a civilisation and a state of society in which the arts of the toilet were both highly esteemed and assiduously practised. We must know that the use of hand-mirrors[1] of highly polished bronze and iron had spread during the latter half of the Early Iron Age as far north as Yorkshire, and as far west as Cornwall; and that bronze tweezers, known even in the previous period, were now widely used for the extraction of superfluous hairs. But what is really the death-blow to the popular conception of the "Ancient Britons" is the use of rouge at this time, which is established by at least two discoveries at Glastonbury, where, in addition, were found together in the same place, an iron-handled bronze mirror, a pair of bronze tweezers, and a black substance used like stibium for darkening the eyebrows and eyelids. The most fervent imagination cannot picture these women with their pink cheeks and pencilled eyebrows and eyelashes in any social or intimate relationship with blue-painted men. The use of woad may have been an ancient form of "frightfulness" practised in battle, which still lingered on among the older or ruder elements of the population of the interior and the north; but, being unknown on the continent, it was almost certainly not employed by the inhabitants of southern Britain who had so recently crossed over from Gaul and settled there. Caesar may possibly have met with this custom on his second invasion when he apparently penetrated as far as Essex, but even that seems doubtful. In any case, however, it is evident that we must banish blue paint from our picture of the daily social life of these people; and if we must substitute

[1] See Frontispiece.

rouge and antimony instead, this new practice is, after all, only a simulation of the appearance of health and vitality, which to this day finds its devotees and admirers amongst us. Lastly, we should note that shaving seems to have been general among the men, who, while allowing their hair to grow free and long, wore only moustaches on the face; and the numerous bronze razors of the previous period[1] show that this custom was not of recent introduction. The women likewise have been generally supposed to have worn their hair loose and flowing, but the discovery of a Late Keltic burial of a woman with carefully plaited tresses suggests that other modes were not unknown.

Only in the remoter parts of the country were people now clad in skins—except perhaps for a sheep-skin or goat-skin cloak donned by the very poor in severe weather. At this time the sleeved tunic, girt about the waist, seems to have been universally worn: the man's garment reaching to the knees, and the woman's much longer; but both alike were made of a bright-coloured tartan-like cloth of wool or linen. Over the tunic, both sexes wore a large cloak apparently more subdued in tint, being often blue or black; and this garment, fastened by a fibula, or brooch, on the breast or right shoulder, was ample enough to enfold warmly the whole body at need. Here the likeness between the sexes ends, as also between the races, for while the men of the Brythonic-speaking peoples of both Britain and Gaul wore loose breeches, long or short, the earlier immigrants, the Goidels, seem to have clung to the kilt, which is, of course, still worn by their descendants in Scotland. Shoes or brogues of raw cow-hide, worn with the hair outside and gathered with a thong over the instep or bound round the ankles, completed, with the possible exception of a conical cap, the different items of the dress of these people, at least, as far as we know at present.

[1] See p. 141, Fig. 30 (*g*).

Among their personal ornaments, perhaps the most numerous and characteristic are the necklaces of beautiful coloured glass beads of native manufacture, and the brooches already mentioned. The latter—generally made of bronze, but sometimes of iron—for the most part fall into four classes, chronologically important because they correspond to the four recognised divisions of the continental La Tène period. It is, however, enough for our purpose here to note that they are all more or less elaborate variations of what we now know as the safety-pin,[1] though some have a hinged pin like modern brooches. This ubiquitous brooch, and, occasionally, a collar or torc and a belt-fastener, seem to have comprised a man's usual ornaments, except among the poor, who probably had nothing more than bone or wooden pins wherewith to fasten their dress. As with men, so with women, we may take as normal the ornaments most frequently found buried with them—the brooch, a bracelet, and a necklace of coloured glass beads.

These, then, are the materials with which we have to make for ourselves a picture of the homes and the home-life of the people of Britain before the Roman conquest. And the more carefully we study this aspect of their civilisation the more abundantly shall we discover points of contact with them, and so be led to realise, with a genuine quickening of sympathy and interest, that these ancient forefathers of ours were very human after all.

[1] See 242, Fig. 50 (*e*).

CHAPTER XVI

Social Attainment

THAT the social horizon of the people of Britain was slowly but surely widening throughout the Early Iron Age, and especially so during the last hundred and fifty years which preceded the Roman conquest, is perhaps most clearly indicated by the growth of towns. Disregarding the Paleolithic communities, we have already seen in the villages of the Neolithic and Bronze Ages that the tendency of man to live in grouped settlements became more and more marked as civilisation developed. Hence, after the coming of the Keltic-speaking peoples, whose tribes were probably better organised than those of the older inhabitants, it is not surprising to find, as time went by and the population increased, that the tribal centres themselves increased so much in size and importance as to be rightly called towns. Such, even before Caesar came, was Camulodunum, now Colchester, the principal town of the Trinovantes; and Verulamium, near St. Albans, the headquarters of the Catuvellauni.

But we know that, after the conquest, the Romans recognised the political capitals of many of the tribes, and they became the chief country towns of Roman Britain with jurisdiction over the greater part of the country. Thus these tribal centres, which, to name only a few, we know now as Winchester, Cirencester, Silchester, Canterbury and Leicester, must also have been towns of more or less importance before the close

of this period; while Lincoln and Gloucester, established so soon after the conquest as *coloniae*, or municipalities on the Italian pattern, were probably likewise inhabited sites at this time. But there were also towns which owed their existence to other than political forces. We may take it as certain that London was a flourishing commercial centre, if not the chief one in Britain, before the Romans came; and that it was established mainly for the purposes of trade. Hunsbury, also, while probably too small for a tribal centre, was a town in the best sense of the word. And if we judge a town by its services to society, by its crowded life and busy, varied activities, rather than by area, then the lake-settlements of Glastonbury and Meare were essentially towns, and not what we now call villages. Further, a number of the strongholds and hill-forts, some old as Neolithic times, also show signs of having been bustling and permanent centres of Late Keltic life—notably Hod Hill in Dorset, Worlebury in Somerset, and Cissbury and Mount Caburn in Sussex.

The economic effects of town life have already been considered, but its social effects must have been likewise profound. Polish is produced by friction, and with many people living in one spot and rubbing shoulders continually, the more pronounced asperities of individual character are bound to disappear. Indeed, if we accept Caesar's statement[1]—corroborated as it is by other evidences—that the manners and customs of south-east Britain and Gaul did not greatly differ, then what several Romans have reported of the Gauls may be applied to our own people; and we may know them to have been likewise habitually hospitable, with a native politeness of bearing towards strangers and ceremonious in the conduct of their meals. On the other hand, we have the widespread evidence of the

[1] *B.G.*, V, 14, § 1.

numerous little cooking pots, as well as the small cakes or buns actually found at Glastonbury, to prove that the meal itself, in southern Britain, at least, was not now normally the wild-beast spectacle which those writers described.

We have seen how all-important the meal was at this time, to judge from the contents of the huts. But this institution has a social aspect which deserves a moment's consideration, because ever since those far-off days when man first forbore to snatch at his fellow's food, it has been a civilising agent of real importance. Very early in the long story of man a "kill" would bring individuals of the hunting group flocking together for one common purpose; and, by the sheer physical sense of wellbeing which accompanies eating, these unpremeditated meals would promote a feeling of goodwill and fellowship one with another. But it is a psychological fact that the sharing of a pleasure, however lowly, with another person, induces in our subconscious minds an association of the ideas of pleasure and that person, with the practical result that when we see him again we greet him with joy. Thus man's heritage of the animal began to be turned like a weapon against the animal still surviving in him—the individual act of feeding having become charged with social potentialities. And so the act of eating together became customary; and the cooking of food, which came later, only tended to conserve and regulate the common repast. This we know, because soon after its introduction we find man evolving the feast—probably the first deliberate expression of his developing social instincts. And from the Mousterian funeral feasts down to to-day's birthday-party or civic banquet, the ceremonial of the feast marks the greater events of the individual and social life of man.

In the Early Iron Age, then, the meal was not merely a natural performance by which the animal man pro-

longed what the old histories used to convince us was a most undesirable existence, but it was a factor of very real importance in the social life of the town. Such, also was trade, and such were amusements, sport, and even the gossip at street corners; for by these means likewise the townsfolk were brought into constant contact, and so were influencing or being influenced by the opinions and actions of each other. Thus every joy, every sorrow, every duty, shared amongst the townspeople marked yet one more step towards that ideal social state which is still the goal of mankind.

That town-dwelling had its duties as well as its pleasures is very evident when we look at Glastonbury, for instance, and note the amount of labour which its erection alone represents. The site was nothing but a peaty island, and most of the enormous quantities of timber used in the substructure, and every scrap of clay and stone, had to be somehow transported across the lake. The timber was probably floated across to the island, but the minerals had to be carried over in canoes. And when we know that very many hundreds of tons of clay and stone were used in the substructure and the causeway, know, too, that the nearest spot where clay could be obtained was half a mile distant, while the stone was brought from places one mile and two miles away, we can form some idea of the magnitude of the task, and of the corporate endeavour to which it witnesses. Nevertheless it is but human to smile at that canoe-load of clay which was found to have been upset in the lake—and one half suspects that some poor fellow got tired of ferrying the stuff across, and . . . But besides the initial undertaking there was the recurrent task of repair, such as was made necessary by the rotting of the timber, as well as by the gradual sinking of the substructure. At this time, of course, all towns were alike in being fortified, thus the upkeep of the defences as well as the manning of them in

time of need were yet other responsibilities shared in common by the townsfolk.

We must also realise that the towns were connected by roads now wide enough to permit the passage of chariots and the wheeled vehicles of agriculture and commerce. The early ridgeways were still in use, but much of this traffic rocked and rattled over roads along which the motor-car speeds to-day. For there is now little doubt that many of the Roman roads, such as Watling Street, merely perpetuated through greater or lesser portions of their length the older ways which had grown into existence with the development of towns. A certain amount of intercourse, however, was still river-borne and carried on, as of old, in canoes and coracles. But the ships in which these people sailed to Gaul to the aid of their kinsmen, or for trade, must have been like those of Brittany—strongly built of oak, more or less flat-bottomed, with high bows and sterns, leather sails, and iron anchors and chains.[1]

But while all the foregoing developments, and many others previously considered, together with the scarcity of hoards at this time, indicate a less turbulent state of society than formerly prevailed, yet intertribal wars had by no means ceased. Nevertheless, they were changing in character, especially during the latter half of this period. Sporadic raids undertaken for plunder were growing less frequent. War was becoming political. The more powerful chieftains turned to the conquest and absorption of the smaller tribes, urged thereto by the dazzling ideas of wider rule, of increased power, even of a unified nation. Yet if this social ideal was chiefly due to the egotism of the individual, inasmuch as each prince saw himself only as the head of the greater state, it was notwithstanding the wider vision that had at last come to these people in the natural sequence of their evolution. And although

[1] *B.G.*, III, 13.

the early political development of Britain lies outside the scope of this work, we should know that this tendency towards national unity progressed so far during this period that the whole of southern Britain, from the Midlands to the English Channel, and from the Severn estuary to the coast of Essex, was ruled for many years before the Roman conquest by a king of the tribe of the Catuvellauni, called Cunobeline—more familiar to us, perhaps, as Shakespeare's Cymbeline.

Throughout this survey it has been our endeavour to picture the human side of all the diverse developments of civilisation. Let us therefore see what intertribal war really meant for these people, as revealed by the Glastonbury excavations. The peaceful busy life of the settlement, which had gone on uninterruptedly for two or three centuries, came one day to a sudden end. Hordes of armed men descended upon the village and stormed the palisade. The villagers, although they possessed so few weapons, put up a stout resistance; but they were overcome, and most of those who did not flee seem to have been massacred on the spot. The remains of their bodies were found in every part of the village; some of the skulls from the site still bearing marks of the combat—one, indeed, showing no less than five sword cuts. After the fight, and mad with victory, the conquerors cut off the heads of some of the slain, and, thrusting them on their spears, bore them aloft through the village in triumph, and then tossed them contemptuously over the palisade into the lake. This we know, because the marks on the skulls which were found in the peat surrounding the palisade show that they had been decapitated and used in this manner. Then the victors apparently sacked the village and razed it to the ground, because from that day onwards the site was never again inhabited. And one wonders if the westward extension of Cunobeline's kingdom brought this to pass, or if it was some tribal feud. And one

thinks of the children in the village, and the ladies with the pink cheeks and the dark eyebrows—what happened to them?

That is one of the charms—if also one of the annoyances—of the study of prehistoric times. Suddenly we happen on some phenomenon which like a lightning flash vividly affords a momentary glimpse of some phase of the life we are trying piece by piece to reconstruct—a glimpse, and then darkness. And with sympathy touched and imagination aroused, we grope and grope in the darkness.

Terrible as this end was, and repeated elsewhere as it must have been—for Hunsbury likewise suddenly ceased to be a place of human habitation on the very eve of the Roman conquest—we, ourselves, can only stand abashed to know that in the Twentieth Century of the Christian era man can still choose these same unsocial methods of bloodshed and destruction wherewith to settle his quarrels or attain his ideals. But, to have done with this darker side of man's nature—which, to repeat, is after all not so important as his impulses towards the light—we may just note that modern warfare in the deploying of troops for attack has but reverted to the methods of these ancestors of ours, whose "novel style of fighting" Caesar describes at some length[1]; and that although the use of chariots in battle had long been discontinued in Gaul, it persisted in Britain for some time after his invasions.

As regards the social organisation of these people, we have now definite proof of the existence of a ruling class; because, to judge from the two most powerful dynasties of the period, the leadership of the tribe was normally hereditary. Thus, for instance, Caesar's most formidable opponent, Cassivellaunus, king of the Catuvellauni, was succeeded by his son Tasciovanus, and he by his son Cunobeline. But also within Cunobeline's

[1] *B.G.*, V, 16, § 4.

kingdom, where the subjugated tribes seem still to have retained a certain measure of autonomy, the same principle applied as far as the tribal towns were concerned. We know this, because the Romans wisely preserved the form of the native local government in the greater part of the country; thus the old tribal territories continued to be administered each from its own capital, while in the towns themselves the chiefs or nobles of the tribe became the local magistrates. But except for the Druids, who are discussed later, the only other class of the population of which we know anything is the slaves. And the fact that they were being exported towards the close of this period is proof alike of the continuation of intertribal war and of the prevalence of slavery in Britain. We should, however, remember that this practice was world-wide, and Egyptian, Greek, and Roman were in this respect no more enlightened than the Early Britons.

But if the developing social instinct of man is evident in his dwelling-places, it is likewise apparent in his burial-places. For the tendency towards grouped burials, which in the previous period became noticeable, had now developed to such an extent that the cemeteries may contain as many as five hundred interments, while, on the other hand, isolated graves are exceedingly rare; thus we can trace the increasing companionableness of man, even in death. The beginning of this period is remarkable for a general return to the earlier practice of inhumation, both in Britain and throughout the Keltic area of north-western Europe. In this country we may probably assume it to have been due in part to the actual invasion of the Keltic-speaking peoples, and in part to one of those waves of cultural migration so frequently remarked in the course of this work. But while inhumation remained the prevailing custom in most parts of the country, cremation, again becoming the fashion on the continent in the latter

half of this period, was re-introduced into the south of Britain; and because it was there restricted chiefly to those districts occupied by the Belgae, they are generally supposed to have brought the custom with them.

First, then, as regards the unburnt burials: the graves usually contain only a single interment, and when they are covered with a barrow it is now but a small and insignificant mound of earth, in shape like an inverted saucer; but many graves have no mound at all. The body may be placed either in a stone cist,

Fig. 48.—Bronze-coated iron bit; from the chariot-burial of a woman, Arras, Yorkshire [¼].

some of which were whitewashed, or merely in a hole dug in the ground; in either case, however, it was the custom to bury the dead in their clothes, for the brooch which fastened the cloak is frequently found in its proper position. The provision of food was practically universal, and the personal ornaments of the dead were generally buried with them; and while in addition, weapons often accompany the men, articles of the toilet are not infrequently found with the women.

But perhaps the most remarkable of all interments are those known as chariot-burials, in which the body of a warrior was buried with portions of his chariot, notably the wheels, and the harness and trappings of his horses. Occasionally, however, the whole chariot

seems to have been buried, and in at least one instance the pair of horses as well. We should also note that a woman was thus honoured in death (Fig. 48), because of the light it throws on the social status of women at this time. And as from later sources we know of instances of female sovereignty of British tribes, it is probable that this woman was likewise queen of her tribe. While Yorkshire is richest in burials of this type, a few isolated examples have been found elsewhere, one of which occurred at Hunsbury; they are, however, both more numerous and earlier in date on the continent, whence, doubtless, this strange custom spread — or was brought — to this country.

Fig. 49.—Cinerary urn, Aylesford [$\frac{1}{6}$].

The burnt burials of southern Britain are generally found in small cylindrical grave-pits without any covering mound. But within the cemeteries, it was remarked as a curious feature that a number of these pits were grouped together in irregular circles; and these circles are thought to be the more or less contemporary graves of relatives, and are therefore known as "family-circles." The cinerary urns found in these grave-pits were made on a potter's wheel; they are elegant in shape and beautifully finished (Fig. 49), and are immediately related to certain contemporary types in Belgic Gaul. It is noteworthy that on the edge of one of these cemeteries, at Aylesford, in Kent, were unburnt burials in stone cists; and these and some fragments of rude hand-made pottery—if the two types of burial are of the same date—tend to show that the older population was

neither exterminated nor wholly driven out of the district by the new-comers, but was living in the same place, probably in a state of semi-serfdom.

Except for the persistent belief in a future life, we cannot gather much knowledge of the religious conceptions of this period from the burial customs. But while among them there is little or no evidence of sun-worship which formerly left such abundant traces in the sepulchral practices, yet because of the persistence of sun-symbols at this time, and their appearance on coins and, a little later, on altars, we may suppose that this ancient worship had not yet entirely ceased. The religion of this period is, in fact, a matter about which but little is known. We may be certain, however, that many of the old superstitions continued to sway man's mind, and that woods and streams remained the haunts of spirits or deities, because many of these local divinities were still worshipped in Roman Britain—as was, for example, Verbeia, the patron saint of the Wharfe at Ilkley. It seems likewise certain that the religion of the Kelts was polytheistic, and, further, that the gods of the Aryan peoples—especially those of the Kelts and Italians, whose languages are most nearly akin—more or less approximated; and thus Caesar could see, or fancy he saw, the worship of Mercury, Apollo, Mars, Jupiter and Minerva in Gaul.[1] In Britain, however, among a multitude of other deities the most popular seems to have been the war-god. And he, probably under several names, but certainly under one—Belatucader, "good at war,"—was the British counterpart of Mars before the Roman conquest, and, afterwards, coupled, if not actually identified, with him.

But, for the purposes of this survey, little is to be gained by a laborious verification of this name or that in the vague and vast Keltic pantheon. Rather would

[1] *B.G.*, VI, 17, § 1–3.

we learn if we could something of the religious ideas and thought of this time. And the first thing that strikes us is that fear still continued to be the prime motive of religion, and sacrifice, its principal observance —sacrifice of others, not self-sacrifice. Yet, if we are horrified at the Roman reports of the barbarous sacrifices of the Gauls, in which they employed the Druids to officiate; or at that familiar tale of Caesar's [1] about the monstrous wicker idols in which some—not all—of the Gauls immolated their victims; we should not forget that even if the worst of these practices were also found in Britain—for which there is no scrap of evidence—the civilised Romans themselves offered human sacrifice to their gods in the second Punic War, and, much later, gloried in the unspeakable atrocities of the arena. From which it is obvious that men are to be judged only by the general moral standard of their age and their country.

Druidism is generally supposed to have been Neolithic in origin, and later modified by contact with the Kelts. It was, of course, common alike to Britain and Gaul; but it has left no archæological evidence with which we may check the statements of Caesar concerning it. According to him,[2] the Druids in Gaul were a corporate clergy governed by a pope, or president, and exempted from taxation and military service. They were carefully schooled from youth in their duties, learning by heart all that concerned their craft, which was orally transmitted and never written down; many of them indeed journeying to Britain for expert instruction in these matters. In addition to their priestly functions they also took part in the administration of justice, but to what extent is still a matter of controversy. They also studied astronomy; and because they kept annual ceremonies, they must have worked out some sort of a calendar, probably at a very

[1] *B.G.*, VI, 16, § 4. [2] *B.G.*, VI, 13–14.

early date. How early they began to read and write we cannot guess, but in Caesar's time they were using Greek characters in their letters. In short, they seem to have been the sole depositaries of all the available learning and knowledge of the time, much as were the monks in the Middle Ages.

Yet withal we know practically nothing of the religious teaching of the Druids. Caesar reported that one of their chief tenets was that souls do not perish but pass from one body to another after death; but what he meant is by no means certain. Their knowledge of the Pythagorean doctrine seems possible when we remember the Greek traffic with Massilia some centuries earlier. But to judge from the contents of both Gaulish and British graves, that other body, to which the soul was to pass after death, was normally regarded as a spiritual, if not physical, replica of the one it has left, having the same needs, tastes and desires—a new personal body and not the body of a new person. Lastly, Diogenes Laertius, probably in the Second Century of our era, wrote that the Druids had taught their followers not alone to fear the gods, but also to do no wrong and quit themselves like men, which, if we may accept it as evidence, would seem to point to the existence of a worthier philosophy of life than that embodied only in sacrifice and ritual.

Of the distinctive British developments of this period, there now remains only to consider the Late Keltic art—the crowning glory of our prehistoric civilisation. Late Keltic art is essentially decorative in conception and execution; and neither animal nor plant forms have place in its finest achievements. In strong contrast to all the earlier art, the curved line, flowing, sinuous, or arrested, now reigns supreme, generally in association with the circle or the scroll.[1]

[1] Compare, for example, p. 242, Fig. 50, with the figures shown on pp. 70, 71, and 158-60.

This art, nowhere carried to such excellence as in Britain, is generally supposed to have been characteristic of the Brythonic-speaking peoples, and brought hither by their invasions; but, as we shall see, it was also practised by the Goidels, if somewhat later. Certain of its motifs have been traced back through continental La Tène forms to Greek art of the Periclean era, not to mention earlier Egyptian prototypes. Nevertheless, its living exuberant spirit is utterly unlike the cold perfection of its classic originals; and, regarded from the æsthetic standpoint, the Late Keltic art of Britain is not only an absolutely different thing from Greek decorative art, but, in the supreme beauty of its line and in the exquisite balance of its masses, has never been surpassed in any age or any country.

It is, of course, hopeless to attempt to describe works of art literally, and more especially art which, like this, is pure ornament. Hence it is possible to read about its trumpet-curves and returning spirals, its eccentric scrolls and basket-pattern filling, and remain bored. But if we are to experience æsthetically the work of these Early British artists we must go to the museums and seek out for ourselves their masterpieces —the enamelled bronze shields and horse-trappings (Fig. 50, *a*, *b*), the engraved mirror-backs[1] and scabbards, the decorated pottery (*d*) and wooden bowls,[2] and the bronze-mounted wooden tankards; not to mention many of the personal ornaments which also show their inimitable touch, such as torcs (*c*), collars, rings, bracelets, pendants and brooches (*e*), engraved, *repoussé*, set with coral, or enamelled, as the case may be. And here we may just note that in the art of enamel British craftsmen stood unrivalled; indeed, there is much reason to suppose that the particular process now known as *champlevé* (*b*),—in which the metal ground is scooped out to form a bed for the fused enamel—

[1] See Frontispiece. [2] See p. 222, Fig. 46.

was independently evolved by them, for in western Europe they alone seem to have practised it.

After the conquest, with the spread of Roman civilisation, Late Keltic art rapidly disappeared in the south of Britain, hitherto its chief centre; nevertheless it

Fig. 50.—Examples of Late Keltic Art: Detail from a bronze shield, *repoussé* and enamelled (*a*), from the Thames at Battersea [$\frac{1}{6}$]; horse-trapping, *champlevé* enamel in red on blackened bronze (*b*), Polden Hill, Somerset [$\frac{2}{3}$]; detail from an engraved gold torc (*c*), Clevedon, Somerset [$\frac{1}{2}$]; domestic pottery (*d*), Glastonbury [$\frac{1}{3}$]; bronze brooch (*e*), Water Eaton, Oxon [$\frac{2}{3}$].

persisted in Scotland and Ireland till the coming of Christianity, where and when it was used by the early Christians to decorate their monuments and metal-work, and to embellish their illuminated manuscripts.

We must not, however, conclude our survey with

the impression that the conquest suddenly overwhelmed a civilisation that was wholly and solely British. It neither marked the beginning of Roman influences here, nor the end of native traditions. We have seen that something like a hundred years of ever-increasing intercourse and trade between this country and Romanised Gaul had preceded the conquest; and this had resulted in a considerable diffusion of Roman ideas and culture in south-eastern Britain before any Roman had settled there. On the other hand, after the conquest, besides the perpetuation of certain native institutions already mentioned, many other Late Keltic elements, lying outside our purview, persisted for centuries side by side with the new culture. Thus the Romanisation of Britain—never, in fact, completed—was a long and gradual process which may be said to have begun with Caesar's abortive invasions.

The evidences for this are many and varied, among which we may briefly note that Latin words began to appear on our native coins very early; then Roman divinities were figured on them, and British princes styled themselves *Rex;* then our coins began to imitate those of Rome, and, lastly, the Roman coins themselves crept into the currency and circulated in the south. Such things as the dice and the exotic arts of the toilet point to the same conclusion; as also do the water-clocks which now began to be used in the southern districts. This instrument, in all probability like that used by Caesar to measure the nights in Britain,[1] was a bronze bowl perforated with a tiny hole, which, when the bowl was floated in a larger vessel of water, caused it to fill slowly and sink within a certain space of time, after which it was raised, emptied and floated again—thus requiring the same amount of attention as the old-fashioned hour-glass. Further, it seems that Latin,

[1] "From reliable measurements with water we saw that the nights [in Britain] were shorter than on the Continent."—*B.G.*, V, 13, § 4.

long the language of the mint, began to be written and spoken here and there in this country; and some authorities insist that it had become the language of the court before the close of this period. Small wonder, then, if Rome began to loom large on the political horizon also, with the result that, as we know, conquest, intrigue, and rebellion looked thither, apprehensively or appealingly, and supplanted princes sought its aid or protection.

Thus according as we regard it as menace or as promise, the influence of Rome crept like a shadow or like a glorious dawn across the south-eastern districts, while the water-clocks, floating and sinking, floating and sinking, measured out the last years of the Early Iron Age in Britain.

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INDEX

ABBREVIATIONS

Pal. Age = Paleolithic Age.
Transition = Paleolithic-Neolithic Transition.
Neo. Age = Neolithic Age.
Br. Age = Bronze Age.
Iron Age = Early Iron Age.

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